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THE
NUMISMATIC CHRONICLE
AND
JOURNAL OF
THE ROYAL NUMISMATIC SOCIETY



THE
NUMISMATIC CHRONICLE
AND
JOURNAL
OF THE
ROYAL NUMISMATIC SOCIETY

EDITED BY

G. F. HILL, LL.D., F.B.A.

KEEPER OF COINS, BRITISH MUSEUM

J. ALLAN, M.A., M.R.A.S.

AND

G. C. BROOKE, M.A.

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I.

THE AUTONOMOUS COINAGE OF SMYRNA.

(SEE PLATES I, II.)

[NOTE.—This paper is the further study promised in my article in *Num. Chron.*, 1914, p. 273, which has been delayed by intervening circumstances: and even now it has not been possible to obtain particulars of the coins in some collections which might have furnished important material. In the lists of specimens, the principal collections which I have been able to investigate, either on the spot or by means of casts, are cited for brevity by initial letters only. The letters used are:—

A = Athens (Cabinet des Médailles).

B = Berlin (Kgl. Museen).

C = Cambridge (Fitzwilliam Museum, if no further reference).

G = Glasgow (Hunterian Museum).

K = Copenhagen (Royal Collection, if no further reference).

L = London (British Museum).

O = Oxford (Ashmolean Museum, if no further reference).

P = Paris (Bibliothèque Nationale).

V = Vienna (Staatsmuseum).

References to publications, mainly the British Museum and Hunter catalogues, Mionnet, and M. Babelon's list of the Waddington collection, and to a few sale catalogues, are added in square brackets. Where the particulars were available, I have given size (in millimetres), weight (in grammes), and, till Period V, die-position. After Period V, the die-positions are constant, with only one or two exceptions, which are noted where they occur.]

THE review of the coinage of Smyrna begins with the re-foundation of the city about 304 B.C., as it is

F.	<i>Obv.</i>	Head of City-goddess r., turreted.	<i>Rev.</i>	Tripod.
G.	"	do.	"	Palm-tree.
H.	"	do.	"	Krater with cover.
J.	"	Head of Apollo r. laur.	"	Homer seated l.
K.	"	do.	"	Chelys.
L.	"	do.	"	Hands in caestus.
M.	"	Head of City-goddess r., turreted.	"	Aphrodite Stratonikis standing.
N.	"	do.	"	Fire-altar.
O.	"	do.	"	Lion standing r.

The fullest series are those of types B and J: the former was used, with slight breaks, throughout the earlier periods, the latter throughout the later, and they overlap to some extent: thus they provide key-series.

PERIOD I.

Smyrna was probably refounded by Antigonos about 304-302 B.C. (Bevan, i. 116), and the building was carried on by Lysimachos up to 281 (*ibid.*, 120). The first question which arises is whether the coins of type A, which were struck for Smyrna under the name of Eurydikeia, are the earliest issues of the new city, or some of the coins of type B with the name of Smyrna may be regarded as preceding them. The Eurydikeia coins must fall within the period when Smyrna was under the rule of Lysimachos—i. e. 301-281: and the upper limit can be further narrowed. The parents of Eurydike were not married till 300 B.C.: and if the portrait on the coins is, as generally supposed, of Eurydike, and is at all faithful, the coins must have been struck quite at the end of the life of Lysimachos, since this portrait can hardly be taken to represent a girl much under eighteen years of age.

It may be questioned whether in the first days of its new existence Smyrna would be of sufficient importance to require a coinage of its own. To take a contemporary parallel, Alexandria Troas, founded as Antigoneia about 310, does not seem to have struck any coins until after its name was changed about 300. But the circumstances of the two cities were in fact dissimilar: Alexandria Troas was an amalgamation of several neighbouring towns, the inhabitants of which would bring with them and use their old local currency; the new Smyrna was apparently an expansion of a small existing community, which had not recently had any coinage of its own. It would be natural enough that, instead of continuing to depend on the issues of other places, the citizens of Smyrna would take the earliest opportunity of celebrating the re-birth of their city by providing themselves with money bearing their own name and types.

As regards style, there is little to choose between the coins of type A and those of the earliest group of type B: they might well be contemporary. Both groups are of four denominations with the same obverse and reverse types: no magistrate's name occurs on any. The ethnic in B is divided to occupy both sides of the field of the reverse, while in A it is in a single line: but this gives no clue for dating. There is, however, a possible test in the lettering, which seems slightly earlier in the coins of type B of this group; and they are also on the average rather heavier than the coins of type A: and these considerations may justify their being put first. The most probable date for the issue of the Eurydikeia coins would be about 288-281, contemporary with the issue of Ephesos under the

name Arsinoeia, which is generally accepted as belonging to these years: and this would suit the portrait. Then the first group of coins of type B may be taken as having been struck during the period 301-288.

In this first group the legend on the reverse consists solely of the ethnic, which is normally divided l. \uparrow Σ ΜΥΡ, r. \uparrow ΝΑΙΩΝ: in one instance it is arranged l. \uparrow , r. \downarrow , and two coins from different reverse dies have it r. \downarrow , l. \downarrow with the letters of the second half retrograde. There seem to be four denominations: the commonest is the largest of 15/16 mm. diameter, the others measuring about 13, 10, and 8 mm. respectively. The dies are not adjusted.

The head of Apollo on the obverse is rather long, with hair drawn closely down from the crown under the wreath, and falling at the back over the neck in four or five slightly waved locks: it is carried back from the forehead over the temple in light rolls, and just covers the tip of the ear: the treatment generally is formal but not stiff. The eye is rather prominent, with a straight upper lid: the chin is full and rounded. The laurel wreath is large and conspicuous, and shows four pairs of opposed leaves. On the reverse, the tripod has large rings on the handles, between which are crossed lines: the legs have two sets of ties, probably intended as rings, though they tend to appear angular; the line under the feet of the tripod is broken downwards in the middle, forming a shallow V.

Exceptional treatment is found in the coins of the second size, which is represented by two specimens, both from the same obverse die, on which the head is generally similar in style to that on the larger coins, except that the crown is more pointed. The reverses

are from different dies: there is a shrimp below the tripod, in one case l., in the other r. The tripod has no rings on the handles, and only one ring-tie between the legs: the exergual line is straight. The legend seems to terminate **NA**.

The largest size is apparently the only one which was issued in any quantity; there are three distinct obverse dies represented among the known specimens. The smaller sizes appear to have been struck only from one obverse die in each size.

1. Type B. *Rev.* l. \uparrow **ΣΜΥΡ**, r. \uparrow **ΝΑΙΩΝ**.
 B (16 mm.^h): K (15 mm.): L [BMC. 9] (15.5 mm., 4.24 grm. \leftarrow): P [4324 = M.S. 1500?] (15 mm. \uparrow): P [Wadd. 1943] (15 mm.): ∇ (16 mm., 4.19 grm. \searrow).
- 1b. " *Rev.* l. \uparrow **ΣΜΥΡ**, r. \downarrow **ΝΑΙΩΝ**.
 B (15 mm. \rightarrow).
- 1c. " *Rev.* r. \downarrow **ΣΜΥΡ**, l. \downarrow **ΙΩΙΑΝ**.
 JGM (15 mm., 4.44 grm. \downarrow): JGM (15 mm., 4.79 grm. ^h). [Pl. I.]¹
2. " *Rev.* l. \uparrow **ΣΜΥΡ**, r. \uparrow **ΝΑ** : below, shrimp, l.
 L [BMC. 10] (13 mm., 2.60 grm. \uparrow).
- 2b. " *Rev.* l. \uparrow **ΣΜΥΡ**, r. \uparrow **ΝΑ** : below, shrimp, r.
 B (13 mm.). [Pl. I.]
3. " *Rev.* l. \uparrow **ΣΜΥΡ**, r. \uparrow **ΝΑΙΩΝ**.
 L [BMC. 11] (10 mm., 1.22 grm. \rightarrow) [Pl. I.]: JGM (9.5 mm., 1.02 grm. \searrow).
4. " *Rev.* l. \uparrow **ΣΜΥΡ**, r. \uparrow **ΝΑΙΩΝ**.
 L [BMC. 12] (7.5 mm., .40 grm. ^h). [Pl. I.]

PERIOD II.

The coins with a portrait-head assumed to be that of Eurydike which were mentioned above have been fully

¹ The reverse of this coin has inadvertently been photographed upside-down.

discussed by Imhoof-Blumer (*Gr. u. Röm. Münzk.*, pp. 66-9), who first demonstrated that they belonged to Smyrna: and it is not necessary to do more here than to summarize his account, with the addition of some details to the list. Like the coins of period I, they appear to be of four denominations, measuring respectively 18, 15, 14, and 8 mm., and have the same types for all four—on the obverse the veiled head r., on the reverse a tripod with crossed lines between the handles and two ring-ties between the legs: the rings on the handles are smaller than on the coins of period I, and above the handles is a palm-branch, which is not discernible on any examples of the earlier period: the line beneath the feet of the tripod is straight: the legend is on l. ↑. The specimen of the third size has on the reverse a bee in the field r., which, as will be suggested in more detail later, may be a value-mark to distinguish this denomination from the second, which approximated closely to it in size.

5. Type A. *Rev.* l. ↑ ΕΥΡΥΔΙΚΕΩΝ.

B [v. Sallet *Beschr.* ii. 88. 1-3]: C (18 mm., 3.92 grm. ↓) [Pl. I]: L [BMC. Ephesus, 75] (17.5 mm., 3.56 grm. ↓): L [BMC. Ephesus, 76] (17 mm., 3.86 grm. ↓): P [Mi. ii. 202.4; S. iii. 78, 475]: V (17 mm., 2.98 grm.): Imhoof (18 mm., 4.05 grm.)

6. „ *Rev.* l. ↑ ΕΥΡΥΔΙΚΕΩΝ.

C [Leake, *Num. Hell. Eur. Gr.* 53] (15 mm., 2.40 grm. ↓) [Pl. I]: L [BMC. Ephesus, 77] (14 mm., 1.91 grm. →): P [Mi., S. iii. 78, 476].

7. „ *Rev.* l. ↑ ΕΥΡΥΔΙΚΕΩΝ, r. in field, bee.
B (14 mm.).

8. „ *Rev.* l. ↑ ΕΥΡΥΔΙΚΕΩΝ.

Comm. [Imhoof] (8 mm., .65 grm.).

PERIOD III.

The next period shows a development in the use of reverse-types: instead of striking coins of different denominations with the same types on both sides, the authorities introduced distinct reverse types for the smaller sizes—the palm-tree for the third size, and subsequently the kithara for the second. The issues of this period fall into three groups: characteristics common to all are that the dies are not adjusted, and that the initial letter of the ethnic is Σ . There is usually either a magistrate's name or a monogram on the reverse. In the case of the tripod-reverses, the form of the tripod is generally similar to that found in period I: there are rings on the handles, with crossed lines (sometimes rather slight) between, and two ring-ties between the legs; the exergual line is straight. The palm-branch over the tripod which occurs in period II is only present in an exceptional instance in this period.

(a) The first group is a small one, with a head of Apollo which in style is almost exactly similar to that of period I. The ethnic and magistrate's name are written in full, but placed in varying directions. On the one coin of the largest size, the ethnic is λ . \uparrow , the name of the magistrate, Aristoteles, is ρ . \downarrow . There are two varieties of the second size, struck by Diphilos and Xenondes, both of which have the ethnic ρ . \downarrow , the name λ . \uparrow . Diphilos was also responsible for smaller coins with the palm-tree reverse, on which the legends are arranged in the same way. These variations recall the uncertainty of arrangement of the reverse-legends on coins of period I, and suggest that the die-engravers had not yet arrived at the rule, subsequently observed

at Smyrna, that both parts of the legend should run in the same direction.

The coins of the second size in this group have the same types—B—as the larger, but are differentiated by a shrimp in the exergue of the reverse. It will be remembered that the same symbol occurred similarly on the second denomination of period I: and it is found also in the next two groups. These facts suggest that it was intended to serve the purpose of distinguishing two denominations of nearly equal size which bore the same types: it would clearly be useful to have such a symbol, when the difference in size and weight was not readily noticeable, to help the users of the coins.

(β) Following these varieties may be placed a few of somewhat inferior workmanship, similarly of three sizes, the two larger of type B, the smallest of type D. On these the head of Apollo is of squarer shape than on the preceding examples: the hair is arranged in stiff ridges across the crown and lumpy rolls over the temples, and the locks falling on the neck are curled up at the ends, the two outer ones very markedly: the wreath is less conspicuous, and usually composed of five pairs of leaves: the eye is large and prominent, with a curved upper lid: and the ear is either just covered at the top by a wisp of hair or entirely free: the chin is angular and the jaw heavy.

The largest size occurs with the names of three magistrates, Dioskourides, Theodotos, and Xenobastes (?): the two latter have a common obverse die. On the second size the names of the magistrates and the ethnic are abbreviated: the names known are Dioskou(rides) and Xeno(bastes?). On both sizes the ethnic is l. ↑, the name r. ↑: the second size has a shrimp in the

exergue of the reverse, as in group (a). In the third size the ethnic, contracted, is r. ↓, the name, also contracted, l. ↓: the only specimen described, of Demokra(tes), is struck from the same obverse die as the coin of Xeno(bastes) of the second size.

(γ) The third group is of much better style, and shows a further progress in the differentiation of denominations. In groups (α) and (β), while a special reverse-type was used for the smallest coins, the two larger sizes were only distinguished by the addition of a symbol to the reverse-type. Now the second size is given a reverse-type of its own, the kithara (type C), though the symbol of the denomination, the shrimp, is still retained in the exergue. Possibly the particular meaning of the symbol was disregarded, as no longer of special importance, since this same symbol is introduced on the reverse of the third size.

Of the largest size examples occur with the names of Arideikes, Lysias, and Menandros, and a monogram which may be resolved *De tr* (Demetrios?). The ethnic, written in full, is l. ↑, the name r. ↑. One of the obverse dies of Arideikes is also used by Lysias and Menandros: and all the dies of these four magistrates are closely alike. The head of Apollo is well modelled, noticeable features being the deep-set eye and square jaw: the ridges of hair radiate from the crown, and the rolls off the forehead are drawn back more firmly than in group (β) and leave the ear quite free, while the locks falling on the neck are not so stiffly curled. The whole effect is that of a portrait: and this is even more marked in an exceptional coin which must belong to this group, but has no magistrate's name, and the ethnic r. ↓: the characteristics of the

head noted above, the eye and jaw, are accentuated on this coin, which shows very careful work both on the obverse and on the reverse, which has a palm over the tripod as in period II. It is tempting to see in this head an idealized representation of Antiochos II, who is known from the treaty of Smyrna and Magnesia (Michel 19) to have been worshipped at Smyrna.

The coins of the second size with type C have a head of Apollo exactly similar in style to that on the larger ones. The ethnic, in full, is $\lambda. \uparrow$, the name $\rho. \uparrow$ in one case, that of Lysias: two other coins have the ethnic $\rho. \downarrow$ and on $\lambda.$ a monogram, of Mena(ndros?) and Au().

The same monogram of Au() also occurs on coins of the third size with type D, which resemble those of the second size in style and have the same arrangement of legends as those with the monogram. It is noticeable that the palm-tree is better executed than on the earlier issues of this type, particularly those of group (a), where it looks like a stiff brush: in this group it has four curved leaves and a bunch of dates at each side. A similar treatment of the palm-tree is found on a Berlin coin, which, like the exceptional coin of the largest size noted above, has no magistrate's name, but only the ethnic $\rho. \downarrow$: the head on the obverse is unfortunately badly centred, but seems very similar to that of the larger coin, with which it may be grouped.

If the head on this group is derived from a portrait of Antiochos II, the coins must be dated after 260: and on general grounds a space of about 35 years—i.e. from 280 to 245—would seem to be reasonable for period III: this might be divided between the three

groups, with the largest share allotted to group (γ), as the one which includes most magistrate's names, so that the dating would be roughly (α) 280-270, (β) 270-260, (γ) 260-245.

(Group α .)

9. *Aristoteles*. Type B.

r. \downarrow ΑΡΙΣΤΟΤΕΛΗΣ , l. \uparrow ΞΜΥΡΝΑΙΩΝ

JGM (16 mm., 3.67 grm. ∇). [Pl. I.]

10. *Diphilos*. Type B.

l. \uparrow ΔΙΦΙΛΟΣ , r. \downarrow ΞΜΥΡΝΑΙΩΝ : below, shrimp l.

JGM (14 mm., 2.45 grm. \uparrow). [Pl. I.]

11. *Diphilos*. Type D.

l. \uparrow ΔΙΦΙΛΟΣ , r. \downarrow ΞΜΥΡΝΑΙΩΝ

B (18 mm.): JGM (14 mm., 2.03 grm. \uparrow). [Pl. I.]

12. *Xenonides*. Type B.

l. \uparrow ΞΕΝΩΝΔΗΣ , r. \downarrow ΞΜΥΡΝΑΙΩΝ : below, shrimp, l.

B (15 mm.).

(Group β .)

13. *Demokra(tes)*. Type D.

l. \downarrow ΔΗΜΟΚΡΑ , r. \downarrow ΞΜΥΡ

JGM (12 mm., 1.90 grm. ∇). [Pl. I.] [Mi.

1048 ΔΗΜΟΚΡΙΤΟΣ (Cous.): [Mi. S. 1516

ΔΗΜΟΚΡΑΤΟΣ (Sest.).]

14. *Dioskourides*. Type B.

r. \uparrow ΔΙΟΞΚΟΥΡΙΔΗΣ , l. \uparrow ΞΜΥΡΝΑΙΩΝ

JGM (15.5 mm., 3.63 grm. \leftarrow). [Pl. I.]

15. *Dioskourides*. Type B.

r. \uparrow ΔΙΟΞΚΟΥ , l. \uparrow ΞΜΥΡ : below, shrimp l.

O. Christ Church [= Mus. Mead., p. 34] (14 mm.).

[Pl. I.]²

² There is a coin of this type at Copenhagen (13 mm.), which seems to be from the same obverse and reverse dies as the Oxford coin: but the magistrate's name is entirely off the flan.

16. *Theodotos*. Type B.

r. ↑ ΘΕΟΔΟΤΟΣ, l. ↑ ΣΜΥΡΝΑΙΩΝ

B (17 mm.): K (16 mm.); V (15.5 mm.,
3.76 grm.).³17. *Xenobastes*? Type B.

r. ↑ ΞΕΝΟΒΑΣΤ · ·, l. ↑ ΣΜΥΡΝΑΙΩΝ

B (16.5 mm.).

18. *Xenobastes*? Type B.

r. ↑ ΞΕΝΟ, l. ↑ ΣΜΥΡ: below, shrimp l.

P [4322 = Mi. 1046, S. 1507] (13 mm. ←):
[Mi. S. 1509 (Sest.)]: [Philipsen Sale 2216].

(Group γ.)

19. *Arideikes*. Type B.

r. ↑ ΑΡΙΔΕΙΚΗΣ, l. ↑ ΣΜΥΡΝΑΙΩΝ

B [Imhoof, G. u. R. Münzk., p. 68, no. 5]
(18 mm.) [Pl. I]: B (17 mm.): JGM (17 mm.,
3.72 grm. ↘: emk. on rev., head r.).20. *Au*(). Type C.

l. ⋈, r. ↓ ΣΜΥΡΝΑΙΩΝ: below, shrimp l.

B (14.5 mm.).

21. *Au*(). Type D.

l. ⋈, r. ↓ ΣΜΥΡΝΑΙΩΝ: below, shrimp l.

K (13 mm.): JGM (13 mm., 1.40 grm. ↘).
[Pl. I.]22. *Demetrios*? Type B.

r. ⋈, l. ↑ ΣΜΥΡΝΑΙΩΝ

B (17 mm.): JGM (17 mm., 3.68 grm. ↘).

23. *Lysias*. Type B.

r. ↑ ΛΥΣΙΑΣ, l. ↑ ΣΜΥΡΝΑΙΩΝ

K (18 mm.): L [Hill, N. C., 1917, p. 14]
(16 mm., 4.43 grm. ↘).

³ A coin at Cambridge [Leake, *Num. Hell.*, ii. 118] (16.5 mm., 3.11 grm. ←) has only . . . ΟΤΟΣ left of the magistrate's name. The head on the obverse is of group (α) rather than group (β): if the name is to be restored as Theodotos, he is a link between the two groups. (See Addenda.)

24. *Lysias*. Type C.

r. \uparrow $\Lambda\Upsilon\Xi\text{IA}\Xi$, l. \uparrow $\Sigma\text{MYPNAI}\Omega\text{N}$: below, shrimp l.
O. Christ Church (18 mm.).

25. *Menandros*. Type B.

r. \uparrow $\text{MENAN}\Delta\text{PO}\Xi$, l. \uparrow $\Sigma\text{MYPNAI}\Omega\text{N}$
P [4825] (17 mm. \downarrow).

26. *Menandros?* Type C.

l. Ⓜ , r. \downarrow $\Sigma\text{MYPNAI}\Omega\text{N}$: below, shrimp l.
L (BMC. 18] (14.5 mm., 3.04 grm. \downarrow). [Pl. I.]

27. No name. Type B.

r. \downarrow $\Sigma\text{MYPNAI}\Omega\text{N}$
G [Macd. 62 = Mi. S. 1511] (17 mm., 2.72 grm.).

28. No name. Type D.

r. \downarrow $\Sigma\text{MYPNAI}\Omega\text{N}$
B (18 mm.).

PERIOD IV.

The coins of types E and H form a very distinct group. Type E is represented by a single specimen, which is unfortunately in such poor condition that it is impossible to say with certainty whom the head on the obverse is intended to portray: but it seems to be a female head, with hair rolled up at the back: and, as there are traces of what looks like the tip of a bow behind the neck, it may be taken for Artemis, though she does not appear elsewhere on the autonomous coins of Smyrna. The reverse type is a chelys, which was used again as a type at a later date, though in a slightly different form: here it is five-stringed, with the strings shown over the shell. The magistrate's name, Symmachos, as well as the general style, links this coin with those of type H.

Type H is found with two, or possibly three, magistrates' names, and is not uncommon: at least eight

obverse dies were used, so the issue must have been fairly large. The reverse-type, a krater with cover, does not recur at Smyrna, nor do I know it elsewhere. But the most remarkable point is the treatment of the head on the obverse. The crown is peculiar, with two turrets only, both set well forward, and apparently a band to secure it passing round the base of the skull behind: it might be described as a frontlet or half-hoop. As for the hair, it is difficult to follow out the exact arrangement: it is drawn back from the forehead in a series of thick twists as far as the ear, and then breaks into two masses, one of which, slightly waved, covers the ear and falls in front of the neck, the other carries on the line of the twists and spreads behind: over the skull the hair is drawn tightly back. The face is markedly individualized, and the whole effect is suggestive of a portrait.

The ethnic in both types is abbreviated **ΣΜΥΡ** and is on l., with the magistrate's name on r.: in type E the legends read upwards, in type H downwards. Type H has also below the ethnic on the reverse a shrimp l., which may stamp it as carrying on the denomination of the second size of the preceding period. The dies are not adjusted.

It is not easy to place these coins in the series, as there are few points of contact with other types. They cannot come much later than the end of period III, as the use of **Ι** for **Ξ** as the initial letter of the ethnic begins to be found in the next period, and the adjustment of dies becomes the rule soon after: and in some points of style, such as the treatment of the eye and mouth, and the forms of the lettering, there are resemblances to group (β) of period III,

though the style is not so hard. But there is such a distinct break between the regular types of period III and their successors, that types E and H may well be put apart by themselves in period IV. And this conclusion may be developed further, if the head of type H is taken as a portrait: the most likely person to be represented thus would be Stratonike, who was worshipped at Smyrna as Aphrodite Stratonikis: and the coins may have been struck after the Laodikeian war, when Seleukos II granted special favours to Smyrna in consideration of its firm support of his cause, and confirmed the privileges of the temple of Aphrodite Stratonikis. The head is not that of the temple statue, if that is correctly identified with the figure on later coins of Smyrna of type M, since the headdress of that figure is a lofty polos: but the action of Seleukos might well lead to the use of a portrait of his grandmother as the city-goddess.⁴

All the foregoing considerations would fit in with a date of about 245-240 for this period.

29. *Pollis*. Type H.

r. ↓ ΠΟΛΛΙΞ, l. ↓ ΣΜΥΡ: to l., shrimp l.

B [Imhoof, *Gr. M.*, No. 351] (15 mm., 1.91 grm.).
 [Pl. I]: L [BMC. 14] (13.5 mm., 2.11 grm. ⁸):
 E. T. Newell (14 mm.).

⁴ The relations of the Seleukids with the Ionian cities were very close at this period, and coin-types would be likely to be affected. Imhoof (*Kl. M.*, p. 53, No. 36) has called attention to the use of the head of Artemis, as on coins of Ephesos of the second half of the third century, as the obverse type of a bronze coin with the name of Seleukos, presumably either II or III. It occurred to me that some of the Seleukid bronze with Apollo-tripod types might have been struck at Smyrna: but their style is not in favour of this.

80. *Symmachos*. Type E.

r. \uparrow Σ YMMAXO Σ , l. \uparrow Σ MYP
K (14 mm.). [Pl. I.]

81. *Symmachos*. Type H.

r. \downarrow Σ YMMAXO Σ , l. \downarrow Σ MYP: to l., shrimp l.

B (15 mm.): K (14 mm.): L [BMC. 15] (13.5 mm.,
2.00 gm. \rightarrow): V (14 mm., 1.90 gm.): V
(14 mm., 1.78 gm.): JGM (13.5 mm.,
2.16 gm. \rightarrow).

82. () *Aris*? Type H.

r. \downarrow]KPI Σ , l. \downarrow Σ MYP: to l., shrimp l.⁵
V (14 mm., 1.90 gm.).

PERIOD V.

The coins next to be considered are all of types F and G, with the turreted head of the city-goddess as the obverse-type. The reverse-types are two of those which were used with the head of Apollo in earlier periods, a tripod for the larger, a palm-tree for the smaller, size. On both denominations the ethnic is l. \uparrow , abbreviated in the case of the smaller coins, while on r. there is a monogram. The coins fall into two groups, of very similar style: in both the dies are not adjusted. The tripod is in most respects like that on earlier issues, with ring-handles and two ring-ties between the legs: the crossed lines between the handles are not discernible, but there is a palm-branch lying over the handles.

(a) The group which seems the earlier includes examples of the larger size with type F only. The

⁵]KPI Σ is Dr. Münsterberg's reading of the coin-legend in this example. The upper part of the K is not visible, and from a cast it looks to me as if the P might be a broken Λ , and the real reading be ΠΟ]ΛΛΙ Σ .

goddess wears a crown of three turrets: the characteristic treatment of the hair is that it is drawn back from the temples in a series of parallel twists ending under the rim of the crown: at the back of the head is a mass of almost vertical strands, under the last twist or just outside it, which breaks into two or three slightly waved locks falling on the neck: the top of the ear is just covered. The eye is rather deep-set, with a straight upper lid, and the chin full. The work generally is fairly good, and akin to that of group (γ) in period III, though not quite so strong. On the reverse, there is an ear of corn below the monogram on r.: the initial letter of the ethnic is Σ . There are three varieties of monogram, but two seem to be only slight modifications of the same name: the obverse die used for both is the same.

(β) In the other group both denominations are represented. On the larger coins of type F the crown of the goddess has four turrets: on the smaller of type G, three. The general style of the work is very similar to that of group (α), but the treatment of the hair is slightly less formal. On the reverse, the initial letter of the ethnic is Γ , which probably marks this group as the later of the two in the period: the ear of corn does not occur as a symbol. There are three varieties of monograms or letters on the larger, and two on the smaller, coins, one being common to both.

The fact that in this period the coinage of Smyrna was in a sense transferred from the patronage of Apollo to that of the city-goddess, the old reverse-types being preserved, but the head on the obverse altered, may perhaps be connected with the events which it has already been suggested led to the choice of types for

period IV. A female head—or two, if the identification of the obverse of type E with Artemis is correct—ousted Apollo from the place which he had held unchallenged since the foundation of Smyrna, except for the brief intrusion of a royal portrait: and the predominance of Aphrodite Stratonikis may have secured for a while the honour to her sex.

The coins of these two groups do not appear to cover a long space of time: they are all fairly close together in style, and show few varieties of monograms. They may be assigned approximately to the decade 240–230.

(Group α .)

33. *Metro*()? Type F.

r. , l. $\uparrow \Sigma \text{MYPNAI}\Omega \text{N}$: on r., ear of corn.


B (18 mm.): V (17.5 mm., 3.68 grm.).

34. *Pyrrhos*? Type F.

r. , l. $\uparrow \Sigma \text{MYPNAI}\Omega \text{N}$: on r., ear of corn.

K [Ram. 78] (18.5 mm.).

34 b. *Pyrrhos*? Type F.

r. , l. $\uparrow \Sigma \text{MYPNAI}\Omega \text{N}$: on r., ear of corn.

JGM (18 mm., 3.72 grm. \downarrow). [Pl. II.]

(Group β .)

35. *A*(). Type F.

r. Λ , l. $\uparrow \Sigma \text{MYPNAI}\Omega \text{N}$

P [4337 = Mi. S. 1483] (18 mm. \uparrow): JGM (18 mm., 4.13 grm. \uparrow): [E. F. Weber sale 2948].

36. *A*(). Type G.

r. Λ , l. $\uparrow \Sigma \text{MYP}$

Gotha: K (11 mm.): L (12 mm., 1.70 grm. \leftarrow): JGM (12 mm., 1.59 grm. \uparrow).

37. *Hip*(). Type G.

r. Π , l. \uparrow **IMYP**

B (12.5 mm.): K (12 mm.): JGM (11 mm.,
1.39 grm. ∇): JGM (12 mm., 1.62 grm. \rightarrow).
[Pl. II.]

38. *Pa*(). Type F.

r. $\textcircled{\text{A}}$, l. \uparrow **IMYPNAION**

P [4336 = Mi. 1092] (18 mm. \uparrow).

39. *Panemos*? Type F.

r. $\textcircled{\text{A}}$, l. \uparrow **IMYPNAION**

G [Macd. 61] (18 mm., 2.68 grm.): L (17 mm.,
3.64 grm. \uparrow). [Pl. II.]

39 b. *Panemos*? Type F.

r. $\textcircled{\text{A}}$, l. \uparrow **IMYPNAION**

O. Christ Church (17.5 mm.).

PERIOD VI.

In the next period the Apollo type reappears on the obverse, associated with two of its former reverses, the tripod and the kithara. At the same time the issues of period V, with the head of the city-goddess as obverse to the tripod and the palm-tree reverses, are continued. The size of the Apollo coins is, however, much reduced: in period III the coins of type B averaged 17 mm. in diameter, those of type C 14 mm.: in period VI the measurements are 13 mm. and 10 mm. respectively. On the other hand, the goddess coins nearly maintain their size as in period V, with an average reduction of only 1 mm. in diameter to 17 mm. for type F, and 11 mm. for type G.

The same names of magistrates occur with all four types, and it seems clear that during this period four denominations of bronze were struck. For the

distinction of denominations the old Apollo types were revived, but with modifications. In period III there had been three denominations with types B, C, and D; and in period V the places of B and D had been taken by F and G, with the same reverse-types and of approximately the same size, but with a female head instead of a male on the obverse. In the new arrangement B and C were substantially reduced: F filled the original place of B, the reduced B succeeded to the former C, G continued to represent D, and the reduced C furnished a fresh lowest denomination. D disappeared entirely: there was presumably no need for it in a reduced form, and there might have been difficulty in distinguishing it from G and C in point of size. Coins of types B and F of this period are easily separated, even if the obverses are worn, by their size: but there is much less difference in this respect between coins of types C and G, and a further tiny denomination, a millimetre or so less in diameter, with the obverse type of C and the reverse of G, would have been very confusing.

It is worth notice that in the rearrangement of types the city-goddess kept the more important place.

In this period the dies begin to be adjusted ↑↑, and this practice continued with hardly any exceptions till the end of the autonomous coinage of Smyrna. The initial letter of the ethnic is usually Σ, but in the closed form with parallel outer strokes instead of the open Ξ. The ethnic is r. ↓, the magistrate's name l. ↓: this arrangement again is the beginning of what was the normal rule of the Smyrnaean mint for the next two centuries. On the two larger denominations ethnic and name are given in full, on

the two smaller contracted to fit the available space. In the treatment of the tripod on the reverses of types B and F a new scheme of ties between the legs is used: instead of two rings being shown, the upper ring is replaced by a cross. The rings on the handles are reduced in size: the crossed lines between them and the palm-branch above still occur.

In the heads on the obverses, compared with those of earlier periods, there is naturally much more change in style to be seen in the head of Apollo, which had been absent from the coinage for about fifteen years, than in that of the city-goddess, which continued from the last period. The head of Apollo is much softer in execution than in period III, and there is a noticeable difference in the scheme of arrangement of the hair: instead of falling straight from the wreath on to the neck in locks, it is drawn into a bunch just below the wreath, and the locks come down in loose waves between the inside of the bunch and the ear: on the crown it is massed instead of radiating from one point. The head is square, and the individualization of period III has entirely vanished. The wreath is composed of smaller leaves set closely together.

The style of the head of the city-goddess is very near to that of group (β) of period V: the hair is rather more freely treated, the twists carried back from the brow being looser, and the lines generally more broken. On the larger coins the mural crown has four turrets, on the smaller three: the body of the turrets scarcely rises above the upper line of the wall of the crown, which is only broken definitely by the battlements.

The names of magistrates occurring in this period are

Zopyros, Poses, Philion, and Philonides. The coin of Philion of type B is exceptionally small in size, being only 10 mm. in diameter, and has the ethnic and the name both contracted: it would appear that for some reason Philion struck a coin of type B for the denomination normally represented by type C.

The four magistrates may be assumed to cover about ten years, from 230 to 220.

40. *Zopyros*. Type F.

1. ↓ **ΙΩΠΥΡΟΣ**, r. ↓ **ΣΜΥΡΝΑΙΩΝ**

B (17 mm.) [Pl. II]: V. (17 mm., 3.98 grm.).

41. *Zopyros*. Type B.

1. ↓ **ΙΩΠΥΡΟΣ**, r. ↓ **ΣΜΥΡΝΑΙΩΝ**

K [Ram. 79 = Mi. S. 1510] (13 mm.).

42. *Zopyros*. Type G.

1. ↓ **ΙΩΠΥ**, r. ↓ **ΣΜΥΡ**

B (11 mm.): P [Wadd. 1948] (11 mm.).

43. *Poses*. Type B.

1. ↓ **ΠΟΣΗΣ**, r. ↓ **ΣΜΥΡΝΑΙΩΝ**

L (13 mm., 2.19 grm.) [Pl. II]: P [4830 = Mi. 1054].

44. *Poses*. Type G.

1. ↓ **ΠΟΣ**, r. ↓ **ΣΜΥΡ**

JGM (11 mm., 1.47 grm.).

45. *Poses*. Type C.

1. ↓ **ΠΟΣ**, r. ↓ **ΣΜΥΡ**

B (10 mm.). [Pl. II.]

46. *Philion*. Type F.

1. ↓ **ΦΙΛΙΩΝ**, r. ↓ **ΣΜΥΡΝΑΙΩΝ**

Gotha (18 mm.): JGM (17 mm., 4.18 grm.).

47. *Philion*. Type B.

1. ↓ **ΦΙΛΙ**, r. ↓ **ΣΜΥΡ**

Gotha (10 mm.).

48. *Philonides*. Type F.

l. ↓ ΦΙΛΩΝΙΔΗΣ, r. ↓ ΣΜΥΡΝΑΙΩΝ

P [4835 = Mi. 1095] (18 mm.): JGM (19 mm.,
4.52 grm.): [E. F. Weber sale 2948].49. *Philonides*. Type B.

l. ↓ ΦΙΛΩΝΙΔΗΣ, r. ↓ ΣΜΥΡΝΑΙΩΝ

L [BMC. 19] (18 mm., 2.00 grm.): [Mi. S.
1506 (Sest.)].50. *Philonides*. Type G.

l. ↓ ΦΙΛΩΝΙ, r. ↓ ΣΜΥΡ

E. T. Newell (12 mm.). [Pl. II.]

51. *Philonides*. Type C.

l. ↓ ΦΙΛΩ, r. ↓ ΣΜΥΡ

JGM (11 mm., 1.28 grm.).

PERIOD VII.

The four types used in period VI continue for the next, though specimens of the two smaller denominations are uncommon. The most noticeable distinguishing characteristic is the introduction of a symbol in the field of the reverse of the larger coins—an ear of corn in type F, as in period V, group (a), but now on l. instead of on r., and in type B a bee, also on l., except in one instance where it is in the exergue. These symbols may have been intended to give an additional mark for differentiating the two denominations which had the same reverse type, in the event of the obverse being worn. In other respects the general scheme is much the same as in the preceding period: but the use of the initial **Ι** (once **Ζ**) for **Σ** in the ethnic becomes normal. Two instances occur of reversion to the earlier form of ties—two rings—between the legs of the tripod, on coins of type F of Demeas and Sosos:

but the coins of type B of the same magistrates show the later form of a cross above and a ring below.

There are minor variations of style in the treatment of the heads on the obverses, and it is possible to divide the issues of this period into three groups.

(*α*) The earliest coins appear to be those of Aristion, Eudemos, and Hegetor, of types B and F. These are very close in style to those of period VI: the head of Apollo on one die of Aristion's is more severe than that of the preceding period, and the head of the city-goddess on the coins of Aristion and Hegetor is obviously by the same hand as that on the coins of Philion. The mural crown with low turrets found in period VI continues in this group.

(*β*) The next group comprises the issues of Ageas, Aristokles, Dionysios, Hermogenes, and Hermon, all except Ageas represented by type F only. The workmanship of these coins is inferior to that of group (*α*): the modelling of the head is flatter, and the treatment of the hair more stringy: it may also be noted that the turrets of the crown rise higher above the upper line, and the lower rim, which in previous issues was straight, shows a downward curve in the middle: also the rolls of hair off the forehead are not carried so far back.

(*γ*) All four types appear in the next group, the magistrates in which are Demeas, Eukles, Pythodoros, and Sosos. In type B a rather boyish head of Apollo is found on a die used in common by Demeas and Eukles: the crown of the head is rather high, and the treatment of the hair free: the laurel-wreath is very narrow, and the bunch of hair at the back rises over it: the last two characteristics are a further develop-

ment of tendencies shown in the die of Aristion noted above. The other Apollo heads of this group are of an effeminate kind, more suited to Dionysos than to Apollo. As regards the specimens of type F, the deterioration of workmanship noted in group (β) goes on: and the execution of the dies is worse than that of coins of type B struck for the same magistrates. The condition of preservation of the examples of types C and G is too poor for any detailed study.

The three groups may have covered a period from about 220 to about 190, group (α) having the smallest share, and group (β) the largest.

(Group α .)

52. *Aristion*. Type F.

l. \downarrow ΑΡΙΣΤΙΩΝ , r. \downarrow ΙΜΥΡΝΑΙΩΝ : to l., ear of corn.

G [Macd. 58 = Mi. S. 1481] (17 mm., 3.79 grm.).

53. *Aristion*. Type B.

l. \downarrow ΑΡΙΣΤΙΩΝ , r. \downarrow ΙΜΥΡΝΑΙΩΝ : to l., bee upwards.

P [Wadd. 1942] (14 mm.) [Pl. II]: V (13.5 mm., 1.90 grm.).

53 b. *Aristion*. Type B.

l. \downarrow ΑΡΙΣΤΙΩΝ , r. \downarrow ΙΜΥΡΝΑΙΩΝ : in ex., bee r. B (14 mm.).

54. *Eudemos*. Type F.

l. \downarrow ΕΥΔΗΜΟΣ , r. \downarrow ΙΜΥΡΝΑΙΩΝ : to l., ear of corn.

B (17 mm.) [Pl. II]: L (16.5 mm., 3.68 grm.).

55. *Eudemos*. Type B.

l. \downarrow ΕΥΔΗΜΟΣ , r. \downarrow ΙΜΥΡΝΑΙΩΝ : to l., bee upwards.

JGM (14 mm., 2.42 grm.): [Mi. 1047?].

56. *Hegetor*. Type F.

1. ↓ **ΗΓΗΤΩΡ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.

JGM (17 mm., 3.69 grm.).

(Group β.)

57. *Ageas*. Type F.

1. ↓ **ΑΓΕΑΣ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.
O. Christ Church (18 mm.).

58. *Ageas*. Type B.

1. ↓ **ΑΓΕΑΣ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., bee upwards.
Gotha (14 mm.). [Pl. II.]

59. *Aristokles*. Type F.

1. ↓ **ΑΡΙΣΤΟΚΛΗΣ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.

G [Macd. 59 = Mi. S. 1482] (17 mm., 2.95 grm.):
K (16 mm.): P [4333 = Mi. S. 1484] (18 mm.).

60. *Dionysios*. Type F.

1. ↓ **ΔΙΟΝΥΣΙΟΣ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.

C (17.5 mm.): Gotha (17 mm.).

61. *Hermogenes*. Type F.

1. ↓ **ΕΡΜΟΓΕΝΗΣ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.

B (18 mm.): G [Macd. 60 = Mi. S. 1498] (18 mm.,
3.88 grm.): P [4332 = Mi. 1093] (18 mm.).

62. *Hermion*. Type F.

1. ↓ **ΕΡΜΩΝ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.
C [Leake, suppl.] (17.5 mm., 3.70 grm.). [Pl. II.]

(Group γ.)

63. *Demeas*. Type F.

1. ↓ **ΔΗΜΕΑΣ**, r. ↓ **ΙΜΥΡΝΑΙΩΝ**: to l., ear of corn.

JGM (16 mm., 3.59 grm.). [Pl. II.]

64. *Demeas*. Type B.

1. ↓ ΔΗΜΕΑΣ, r. ↓ ΙΜΥΡΝΑΙΩΝ: to l., bee upwards.

B (14.5 mm.). [Pl. II.]

65. *Demeas*. Type G.

1. ↓ ΔΗΜΕ, r. ↓ ΙΜΥΡ

B (13 mm.). [Pl. II.]

66. *Demeas*. Type C.

1. ↓ ΔΗΜΕΑ, r. ↓ ΙΜΥΡ

A [53707] (10 mm.). [Pl. II.]

67. *Eukles*. Type B.

1. ↓ ΕΥΚΛΗΣ, r. ↓ ΙΜΥΡΝΑΙΩΝ: to l., bee upwards.

G [Macd. 63 = Mi. S. 1514] (14 mm., 1.71 grm.): JGM (14 mm., 2.19 grm.).

68. *Eukles*. Type G.

1. ↓ ΕΥΚΛ, r. ↓ ΙΜΥΡ

G [Macd. 80] (12 mm., 1.39 grm.).

69. *Pythodoros*. Type F.

1. ↓ ΠΥΘΟΔΩΡΟΣ, r. ↓ ΙΜΥΡΝΑΙΩΝ: to l., ear of corn.

P [4334 = Mi. 1094] (17 mm.): [? Philipsen sale 2216].

70. *Pythodoros*. Type B.

1. ↓ ΠΥΘΟΔΩΡΟΣ, r. ↓ ΙΜΥΡΝΑΙΩΝ: to l., bee upwards.

C [Leake, *Num. Hell.*, ii. 118] (13.5 mm., 2.07 grm.): JGM (14 mm., 1.99 grm.): JGM (14 mm., 2.11 grm.).

71. *Sosos*. Type F.

1. ↓ ΣΩΣΟΣ, r. ↓ ΙΜΥΡΝΑΙΩΝ: to l., ear of corn.

P [Wadd. 1946] (16 mm.).

72. *Sosos*. Type B.

1. ↓ ΣΩΣΟΣ, r. ↓ ΙΜΥΡΝΑΙΩΝ: to l., bee upwards.

JGM (15 mm., 2.81 grm.): [Mi. 1035?].

73. *Sosos*. Type C.

1. ↓ ΣΩΣΟΣ, r. ↓ ΙΜΥΡ

P [4315 = Mi. 1044] (11 mm.).

From a review of the foregoing periods, with the magistrates and dates assigned to each, it would appear that during the third century B.C. the monetary magistrates at Smyrna averaged about four to a decade. But the issues of coins were not large, and, as several magistrates are only known from single specimens, it is very probable that we are not in possession of anything like the full list.

At this point all the types which had been in use disappear, except B, and an entirely fresh set comes on the scene: and this marks the end of the first section of the catalogue. The reasons for dating this change to about 190 B.C. will be discussed at the beginning of the next section.

The question of the values represented by the different denominations will be reserved for treatment at the end of the whole series, as some important evidence is derived from the latest autonomous coins.

J. G. MILNE.

ADDENDA.

After this article was in proof, some further examples of importance came to my notice, and should be added here.

There is a specimen of no. 16 at Oxford (16 mm., 3.71 grm. ↓) which, like the Cambridge coin mentioned in the foot-note, has a head on the obverse resembling that of group (a): it seems to be from the same

reverse die as the Copenhagen specimen. This confirms the suggestion that Theodotos provides a link between the groups, and also the restoration of the name on the Cambridge coin.

A coin of var. 36 is catalogued as No. 2591 in the Lucerne sale of 18th June, 1923 (12 mm., 1.40 grm.). The ethnic on this example is **IMYPNA**: on the other specimens described the termination is off the flan.

A fresh variety, which should perhaps come after 37, is the following:

His() or *Is*(). Type G.

r. **ΙΞ**, l. \downarrow [**Ι**] **ΜΥΡΝΑΙΩΝ**

O (12 mm., 1.86 grm. $\frac{1}{2}$).

But the initial letter of the ethnic is unfortunately off the flan. It is possible that it was **Ξ**, and that this coin should go with group (α) rather than group (β) of period V: the work is better than that of the coins of type G in group (β), and the ethnic, besides being uncontracted, is placed \downarrow instead of \uparrow .

II.

A FIND OF THIRTEENTH-CENTURY COINS AT ARTA IN EPIRUS.

(PLATE III.)

THE seventy-four coins described below were found at Arta in Epirus. They passed into the hands of the late F. W. Hasluck, and were presented by him to the British Museum shortly before his death. The occurrence of a number of rare and unpublished types and the evidence of the site combine to give the find a considerable interest. It is only to be regretted that

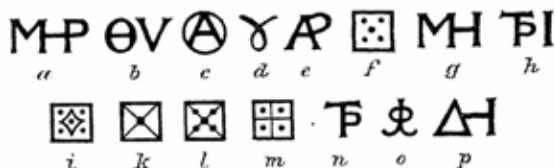


FIG. 1.

Mr. Hasluck never had the time to describe these coins himself. They throw light on one of those by-ways of history in which he was wont to wander with so much pleasure to himself and profit to others.

The coins are classified below by types, and the attribution of each class is discussed. A short table of reigns follows, and the results are summed up in a few notes on the hoard as a whole. The more doubtful attributions to Emperor or Mint are followed by query-marks.

A. DESCRIPTIONS, &c.

The coins are all scyphate. Few are well-preserved, many are extremely worn. The size ranges from 0.9 to 1.2 inches, the weight from about 16 to 46 grains (1.04–2.98 grammes): the average of the coins, weighed in bulk, is almost exactly 28.5 grains (1.85 grammes).

The concave side of the coins is described throughout as the obverse, as it bears the figure of the Prince: technically, it is the reverse.

Class I. 6 coins. (Pl. III. 1.)

Obv.—Prince on l., and Saint on r., standing, three-quarters length, facing, holding between them cross in circle on long shaft. Prince wears crown and holds cross in r. hand: Saint wears nimbus and holds sword in l. hand.

MX
ΔEC high in field l.,
ΠΟ
...

O A Γ
M high in field, r.
I

Rev.—Angel, wearing nimbus, standing facing, with wings spread, hands folded on breast in prayer.

Attribution: MICHAEL II (or I)—EPIRUS.

Cp. B.M.C. Vandals, &c., p. 226, Schlumberger, *Numismatique de l'Orient latin*, p. 373, Pl. XIII. 21, Sabatier, *Description générale des monnaies byzantines*, Pl. LIX. 10, 11.

Schlumberger describes the Saint on obverse as St. Demetrius, quoting a reading from a coin in Berlin "A. ΔH", and the figure on reverse as St. Michael, quoting reading "XM" from same coin.¹ He attributes

¹ Dr. Regling has kindly sent a cast of this coin. The reading certainly might be O A ΔH on *obv.*; nothing is clear on the *rev.* The readings on our *obv.* are more convincing, however; and it is

the coin to Michael I of Epirus. Sabatier shows the Virgin on r. of obverse (MHTHP ΘΕΟΥ, as in Fig. 1 *a, b*), and St. Michael (XM) on reverse. He attributes to Michael VIII Palaeologus.

The reading of our coins, MI, proves the Saint on r. of *obv.* to be St. Michael, and not St. Demetrius. No legend is visible on *rev.*, and the figure is naturally taken as that of an angel (cf. the imperial surname "Angelus"). Of course it is possible that Schlumberger and Sabatier were describing different types; it is perhaps more probable that they give different interpretations of worn specimens.

Schlumberger's attribution to Epirus is probably right, but the Emperor is perhaps Michael II rather than Michael I (see below). No known coin of Michael VIII at all resembles this.

Class II. 1 coin.

Obv.—Prince on l. standing facing, crowned by Saint on r. standing slightly towards l. Prince wears crown and holds standard in r. hand: Saint wears nimbus and holds sword, resting on ground, in l. hand. Reading uncertain: Λ Δ Π on l. upwards (?).

Rev.—Uncertain. Apparently Saint, wearing nimbus, seated facing: O A (as in Fig. 1 *c*) l. in field.

Attribution: MANUEL ANGELUS—THESSALONICA
(or EPIRUS).

The reading is uncertain, but is possibly the remains of MANOY (as in Fig. 1 *d*) ΗΛ ΔΕΣΠΟΤΗΣ. For the type, cp. B.M.C. Vandals, pp 197–9, Pl. XXVI. 6, and, more especially, 10—coins attributed to Manuel

hardly probable that there are two major varieties of this one type, one showing St. Michael, one St. Demetrius, on *obv.*

Angelus at Thessalonica A.D. 1230-32. As this same Manuel was despot of Epirus 1230-37, the attribution to that country must also be considered.

Class III. 1 coin.

Obv.—As II above, but no sword visible in hand of Saint, and no legend legible.

Rev.—Half-length figure of Saint, facing, wearing nimbus

and holding spear in r. hand. $\begin{matrix} \text{O} \\ \text{A}\Gamma \\ \text{O} \\ \text{C} \end{matrix}$ in field, l.

Attribution: MANUEL ANGELUS or THEODORE ANGELUS—
THESSALONICA (or EPIRUS).

The obverse is very similar to that of Class II. Cp. B.M.C. Vandals, Pl. XXVI. 3.

The Saint on reverse is uncertain.

Class IV. 1 coin.

Obv.—Prince on l., and Saint on r., standing facing, holding castle(?) between them. Prince wears crown, and holds standard in r. hand. Saint wears nimbus, and holds sword in l. hand.

$\begin{matrix} \Pi\text{O}\Lambda[\text{IC}] \\ \Theta\text{ECC}\Lambda \\ \Lambda\text{ON} \\ \text{IKI} \end{matrix}$ high in middle of field, in four lines.

Rev.—Angel, wearing nimbus, with wings spread, standing facing, inclined slightly to r., holding in both hands cross with two cross-bars(?) transversely to r.

Attribution: MANUEL (or THEODORE) ANGELUS—
THESSALONICA.

Cp. B.M.C. Vandals, p. 198, Pl. XXVI. 7, and p. 196 note. The mint is certain, the Emperor doubtful. The Saint on *obv.* is uncertain; the object

held by him and the Prince is probably a castle. The figure on *rev.* may be St. Michael. Other specimens of the coin in British Museum appear to read $\begin{smallmatrix} X \\ AP \end{smallmatrix}$ (as in Fig. 1 e) $\begin{smallmatrix} X \\ M \end{smallmatrix}$. On this coin nothing is legible.

Class V. 4 coins. (Pl. III. 2.)

Obv.—Prince on l., and Saint on r., standing, three-quarters length, facing, holding between them cross in circle set on triangle on long shaft. Prince wears crown, and has r. arm bent over body: ornament (as in Fig. 1 f) on robe. Saint wears nimbus, and has l. arm bent over body.

$\begin{smallmatrix} \text{IW} \\ \Delta \\ \Pi \end{smallmatrix}$ on l., $\begin{smallmatrix} \text{MH} \\ \text{T} \end{smallmatrix}$ on r.

Rev.—Half-length figure of Saint, facing, wearing nimbus, and holding sword in r. hand upwards over l. shoulder.

$\begin{smallmatrix} P \\ \omega \\ \Gamma \\ | \\ O \\ C \end{smallmatrix}$ on r. downwards.

Attribution: JOHN ANGELUS—THESSALONICA.

We have here a "John, Despot" associated with Saint Demetrius on the obverse. The Saint on the reverse cannot be certainly identified, though it is plausible to piece together the name "Georgios" from several specimens. The obverse type is much like that of coins attributed to Theodore Angelus of Thessalonica (cf. B.M.C. Vandals, Pl. XXVI. 1 ff.), and the attribution of this piece to John Angelus is highly probable.

For other coins attributed to John, see Sabatier, p. 305, Pl. LXVII.

Class VI. 13 coins. (Pl. III. 3.).

Obv.—Prince on l., standing facing, crowned by Saint on r., standing slightly towards l. Prince wears crown, and holds cross in r. hand and sword in l.: ornament (as in Fig. 1 f) on robe: Saint is winged and wears nimbus. Legend on l. uncertain, $\overset{X}{M}$ low r. in field.

Rev.—Saint seated facing, wearing nimbus.

$\overset{O}{A}\Gamma$ 1. in field, $\overset{MH}{TRI}$ (as in Fig. 1 g, h) r., in field.
 ΔH $\overset{OC}{C}$

Attribution: MICHAEL II—EPIRUS.

The Saint on obverse is Michael, the Saint on reverse Demetrius. The name of the prince cannot be read; but he is probably a Michael—perhaps the second rather than the first.

Class VII. 3 coins. (Pl. III. 4.)

Obv.—Prince on l., and Saint on r., standing facing, holding between them a long cross. Prince wears crown and holds cross(?) in r. hand: ornament (as in Fig. 1 i) on robe: Saint is winged and wears nimbus.

Rev.—Half-length figure of Saint, facing, wearing nimbus and holding sword in r. hand upright over r. shoulder.

$\overset{\Gamma}{OA}$ 1. in field, $\overset{HH(?)}{T}$ r. in field.
 $\Delta H(?)$ $\overset{OC}{C}$

Attribution: MICHAEL II—EPIRUS.

St. Michael may be plainly recognized on obverse, although not named; his presence there suggests that the coin belongs to an Emperor of that name. The Saint on the reverse is uncertain—probably Demetrius. Types hitherto unknown.

Class VIII. 1 coin. (Pl. III. 5.)

Obv.—Prince on l., and younger prince on r., standing facing, holding between them cross with two cross-bars. Prince on l. wears crown and holds standard (?) in r. hand, and has ornament (as in Fig. 1 *k*) on robe: Prince on r. wears crown (?) and holds sword (?) in l. hand, and has ornament (as in Fig. 1 *f*) on robe.

Rev.—Similar to VII above. Legend obscure.

Attribution: MICHAEL II and NICEPHORUS (?)—
EPIRUS (?).

The obverse shows two princes—the one on r. apparently a junior subordinate. The reverse is similar to that of Class VII, but possibly not the same Saint.

It is tempting to attribute the coin to Michael II of Epirus and his son Nicephorus.

Class IX. 10 coins. (Pl. III. 6.)

Obv.—Prince on l., and Saint on r., standing facing, holding between them long cross with two (sometimes three) cross-bars. Prince wears crown, and has r. arm bent across body: ornament (as in Fig. 1 *l*) on robe. Saint wears nimbus, and has l. arm bent over body.

$\overline{\text{I}\omega}$ Δ Π Γ	on l. downwards,	O A Δ	on r. downwards.
--	------------------	--------------------------------------	------------------

Rev.—The Virgin seated, facing, wearing nimbus, her hands raised in front of her in prayer. Fleur-de-lis l. and r. in field, below: **MHTHP ΘΕΟΥ** (as in Fig. 1 *a*, *b*) l. and r. in field above.

Attribution: JOHN I VATATZES—THESSALONICA.

• The obverse shows a Prince, John, with a Saint, probably Demetrius, the reverse the Virgin. Cp.

B.M.C. Vandals, Pls. XXVIII, XXIX. Nicaea. The attribution to John Vatatzes is extremely probable; but, as these coins are not identical with any of his Nicaean issues, we may perhaps attribute them to Thessalonica: cp. Sabatier, Pl. LXV. 13, similar coin attributed to Theodore II.

Class X. 1 coin.

Obv.—Prince on l., and Saint on r., standing facing, holding between them long cross with two cross-bars. Prince wears crown, and has r. arm slightly bent at side. Saint wears nimbus.

Rev.—Saint seated facing, wearing nimbus.

ΔH
 MH (as in Fig. 1 g) r. in field.

Attribution: JOHN I VATATZES (?)—THESSALONICA.

Obverse similar to Class IX, reverse St. Demetrius. The reign is uncertain.

Class XI. 1 coin.

Obv.—Prince on l., and Saint on r., standing facing, holding between them castle(?). Prince wears crown, and holds standard in r. hand: ornament (as in Fig. 1 f) on robe: Saint wears nimbus.
 Δ l. in field.

Rev.—Half-length figure of Christ, facing, wearing nimbus.
 \overline{IC} l. in field.

Attribution: THEODORE ANGELUS (?)—THESSALONICA.

Quite uncertain, but probably Thessalonica: cp. obverse of Class IV. Berlin has a coin, which may be

the same as this, with $\Theta\epsilon\omicron\Delta$ on *obv.*, l., and $\begin{matrix} X \\ AP \\ X \\ M \end{matrix}$ r.,
i. e. Theodore and the Archangel Michael.

Class XII. 1 coin.

Obv.—Prince on l., and Saint on r., standing facing, holding between them uncertain object. Prince wears crown, and holds long standard(?) in r. hand: ornament (as in Fig. 1 *m*) on robe. Saint wears nimbus, and has l. arm bent across body.

Δ
K in field r.

Rev.—Half-length figure of Christ, facing, wearing nimbus.

IC on l. (?), $\frac{\overline{XC}}{\overline{AE}}$ slanting upwards, on r. Double-struck.

Attribution: MANUEL ANGELUS (?)—THESSALONICA (?).

Apparently belongs to a member of the house of "Ducas": on comparison with coins shown in B.M.C. Vandals, Pl. XXII, we may tentatively attribute to Thessalonica.

Class XIII. 2 coins (reverse of one uncertain).

(Pl. III. 7.)

Obv.—Prince on l., and Saint on r., standing facing, holding between them star on a long shaft. Prince wears crown, and has r. arm slightly bent at side: Saint wears nimbus, and has l. arm slightly bent at side.

Rev.—Bust of Christ, facing, wearing nimbus, hands slightly raised in blessing.

IC XC, l. and r. in field.

Attribution: JOHN VATATZES (?)—NICAIA.

The obverse is very close to coins attributed to Theodore I and John I of Nicaea (cp. B.M.C. Vandals, Pls. XXVIII, XXX).

Class XIV. 8 coins. PL. III. 8.)

Obv.—Prince on l., and Saint on r., standing facing, holding between them castle (?) surmounted by star. Prince wears crown, and holds standard in r. hand; ornament (as in Fig. 1 k) on robe: Saint wears nimbus, and holds sword in l. hand.

Above the star: $\Theta\epsilon\omicron\Delta$
 ω

on l. downwards $\begin{matrix} A \\ \wedge \\ C \end{matrix}$ (?), on r. downwards $\begin{matrix} O \\ A \\ \Delta \\ TP \end{matrix}$ (as in Fig. 1 n).

Rev.—Large cross voided, with floriate ends to limbs: small cross in centre.

Attribution: THEODORE ANGELUS—THESSALONICA.

The Prince is a Theodore and is associated with Saint Demetrius; the large cross voided is clearly connected with the large fleur-de-lys of Class XXII, below.

Both these classes are quite outside the ordinary Nicaean range; we must either attribute them to Thessalonica or Epirus, and perhaps the former is the safer. (Cp. for reverse type, Sabatier, LIX. 13, attributed to Michael VIII Palaeologus.)

Class XV. 3 coins. (PL. III. 9.)

Obv.—Christ, wearing nimbus, on r., seated l., crowning Prince kneeling to front, supported by Saint standing behind him.

$\begin{matrix} X \\ O \\ \Pi \\ \Lambda\epsilon \end{matrix}$ on r. downwards.

Rev.—Bust of Christ facing, blessing.

K on l., χ on r.

Attribution : MICHAEL VIII PALAEOLOGUS—NICAËA
OR CONSTANTINOPLE.

Cp. B.M.C. Byzantine, Pl. LXXIV. 4, and Vandals, p. 224 (Wroth admits the attribution to Nicaea, not Constantinople, as possible, and it is perhaps more in place here).

Class XVI. 1 coin.

Obv.—Prince standing facing, holding standard in r. hand, and wearing crown.

Rev.—Uncertain. Saint, wearing nimbus, seated facing(?).

Attribution : Uncertain.

Class XVII. 1 coin.

Obv.—Prince standing facing, holding cross in r. hand and wearing crown, r. arm bent at side.

Rev.—Uncertain: apparently over-struck. Angel with wings spread? (The under type shows a globe with cross on it to r.)

Attribution : MANUEL ANGELUS(?)—THESSALONICA.

Uncertain, but not unlike coins attributed to Manuel of Thessalonica: cp. B.M.C. Vandals, Pl. XXVI.

Class XVIII. 1 coin.

Obv.—Prince standing facing, holding globe with cross on it in l. hand: he wears crown, and bends r. arm across body: high on r., hand crowning him. Two pellets, ••, high in field, l.

Rev.—Quite uncertain.

Attribution: MANUEL ANGELUS (?)—THESSALONICA.

Very similar to XVII, and probably goes with it.

Class XIX. 1 coin. (Pl. III. 10.)

Obv.—Prince standing facing, holding standard in r. hand, r. arm bent, and globe with cross on it in l.: he wears crown, and has ornament of four pellets on his cloak on l. Above, a hand placing crown on head (almost obliterated).

Δ
 KA
 CO
 in field r., downwards Λ AC in field l., ω .
 KA
 PIC

Rev.—Saint standing facing, wearing nimbus. TP (as in Fig. 1 n), $\mathbf{V}\Phi\Omega$ (as in Fig. 1 o), l. and r. in field. Fleur-de-lys low r. in field.

Attribution: THEODORE II—NICAËA.

Cp. B.M.C. Vandals, p. 222, Pl. XXXI. 10. A certain attribution: the saint on the reverse is Tryphon.

Class XX. 1 coin.

Obv.—Details uncertain but similar to XIX. No legend visible.

Rev.—Bust of Christ, facing, wearing nimbus.

$\overline{\text{IC}}$ $\overline{\text{XC}}$ l. and r. in field. Overstruck (?).

Attribution: THEODORE II—NICAËA.

Probably the same as XIX, with reverse restruck.

Class XXI. 6 coins. (Pl. III. 11.)

Obv.—Prince standing facing, wearing crown, holding standard in r. hand and roll in l.: pellets on cloak l. and r.: high in field, r., a star.

Γ O
 Δ
 K l. and r. in field.
 A

Rev.—Saint seated facing, wearing nimbus, holding sword on knees in both hands: in field, r., star.

O
 ΔH (as in Fig. 1 p) OC l. and right in field.
 MH (as in Fig. 1 g)
 TPI (as in Fig. 1 h)

Attribution: JOHN I VATATZES—THESSALONICA.

The obverse is closely akin to that of Nicaean coins of John I Vatatzes: cp. B.M.C. Vandals, Pl. XXX. But the reverse type is distinct, and St. Demetrius points rather to Thessalonica.

Class XXII. 7 coins. (Pl. III. 12.)

Obv.—Prince standing facing, wearing crown, holding long cross in r. hand, l. hand at side. Fleur-de-lys, l., in field.

	X	Π	
A	M	Λ	
€		O	on l., in centre, and on r. downwards.
O		Λ	
		Γ	

Rev.—Large fleur-de-lys.

Attribution: MICHAEL VIII PALAEOLOGUS—
THESSALONICA.

The legend of obverse leaves no doubt as to the Emperor. The coin is certainly not of Constantinople; it is clearly associated with Class XIV, and probably follows it at Thessalonica: cp. Sabatier, Pl. LXIV. 14 for reverse type attributed to John I Vatatzes-Nicaea.

TABLE OF REIGNS.

Princes whose coins probably appear in the hoard are italicized.

CONSTANTINOPLE. Latin Emperors.	NICAËA.	THESSALONICA.	ÉPIRUS.
	Theodore I Lascaris, 1204-22.		Michael I, 1208-14. Theodore Angelus, 1214-30.
	<i>John I Vatatzes</i> , 1222-54.	<i>Theodore Angelus</i> , 1222-30. <i>Manuel Angelus</i> , 1230-32. <i>John Angelus</i> , 1232-44. Demetrius, 1244-46. <i>John I Vatatzes</i> , 1246-54. <i>Theodore II</i> , 1254-58.	Manuel Angelus, 1230-37. <i>Michael II</i> , 1237-71.
Michael VIII Palaeologus, 1261-82.	<i>John II Lascaris</i> , 1258-59. <i>Michael VIII Palaeologus</i> , 1259 or 1260-61.	<i>John II Lascaris</i> , 1258-59. <i>Michael VIII Palaeologus</i> , 1259 or 1260-61.	

B. RESULTS.

A glance over the attributions will show that we have to deal with coins of the period from about 1230 to 1260 of the mints of Thessalonica and Nicaea, possibly of Constantinople, and of one other mint, which, from the find-spot, we shall naturally seek in Epirus. The coins of Nicaea are only a handful in all. To Thessalonica we can attribute a few coins with certainty, a large number with great probability. Saint Demetrius who appears so frequently was the patron of the city. We appear to have a continuous coinage from Theodore Angelus down to Michael VIII Palaeologus.

Coins of the Emperors of Nicaea, struck at Thessalonica, appear to be unknown as yet; but there can be no difficulty in supposing that those Emperors continued the issues of the mint after uniting the rival Empire to their own. The coins of the third (the Epirus) mint are, some certainly, probably all, to be assigned to a prince of the name of Michael. Class I has been assigned to Michael I. This attribution, however, leaves us with the problem of a big gap in the series between him and Michael II; for coins that can be plausibly attributed to Theodore and Manuel at this mint appear to be lacking. It is perhaps better to assign all four classes (I, VI, VII, VIII) to Michael II whose long reign allows time enough for all. There can be no doubt of the general historical setting of the find. The Emperors of Nicaea cherished the hope of reuniting Epirus to the Greek Empire. In 1259 the troops of Michael Palaeologus, under his brother John, invaded Epirus and gained

a great victory over the despot Michael and his allies in the plain of Pelagonia. As a result of the battle the fortresses of Joannina and Arta fell, and the despot Michael who had dreamed of seizing Thessalonica was driven to flight. In the very next year, however, the tide turned, and the invading army was repulsed. The occupation of Arta (1259-60) would be a suitable occasion for the hoard; its burial might have been due to the sudden withdrawal of the Greek troops in 1260. The presence of coins of Michael VIII Palaeologus is consistent with this date, if he came to the throne in 1259.² It is noteworthy that there are no coins of Michael VIII of certain Constantinople mintage.

H. MATTINGLY.

² If this date is too early, we must place the find a few years later in the long drawn-out struggle between the Empire and the Despots. Bury, in his edition of Gibbon, vi. 439, places the coronation of Michael in Jan. 1260, not 1259.

III.

SOME LATER COINS OF THE CRUSADERS.

(SEE PLATE IV. 1-8.)

WHEN William II de Villehardouin died in 1278, and his Principality of Achaia passed into the hands of Charles I of Anjou, King of the Sicilies, he left as dowry to his third wife Anna Comnena, called Agnes by the Greeks, whom he had married in 1259, the fiefs of Clarenza and Calamata in the Principality of Achaia. This lady, the daughter of the despot Michael II of Epirus, had been married to William at a time when he had no male heirs, and, as so often happened during the rule of the Frankish conquerors in Greece, only two daughters were born, Isabella, afterwards Princess of Achaia, and Margaret.

These two daughters were also destined to have no male descendants, which was the cause eventually of the struggle between the houses of Burgundy and Majorca for the Principality. The arrangement for this dowry was embodied in the treaty of Viterbo made between Charles and his vassal William in 1267, and a marriage was arranged between Philip of Anjou, heir to the Sicilian crown, and William's elder daughter Isabella. In this document, which minutely regulated the Achaian succession, the Princess Anna, third wife of William, was bound by oath not to intervene in the affairs of the Morea.¹ Anna, Princess

¹ Rodd, *Princes of Achaia*, i. 249.

of Achaia, is mentioned in 1259 as concurring in the arrangements by which Guy de la Roche was made Bailie for Achaia, during the detention of William, made prisoner at the battle of Pelagonia.² After William's death, Charles I forced Anna to receive the fiefs of Mantichorion and Zonklon in the Morea, in exchange for Clarenza and Calamata, probably because of the greater importance of the latter for his military schemes.³ Three years after her husband's death Anna married Nicholas II de St. Omer, heir to half Thebes and owner of Passova and Akova, these rich fiefs being now supplemented by Anna's dowry in the Morea and Italy. The death of William, who had made Clarenza his principal court, put an end to the pomp and chivalry of that place, hereafter to be governed by Neapolitans and strangers, vassals of the house of Anjou.⁴ The famous mint of Clarenza was, however, continued to at least the end of the reign of Prince Robert of Achaia, after which the currency was probably that of Venice up to the time of the Turkish occupation.⁵ I have a denier, acquired in Greece, with the following legends:

Obv.—+ANPCI ꝰ NCLARC. Cross pattée.

Rev.—DE CLARENCIA. Châtel. (Pl. IV. 1.)

I suggest that this should be read:

ANNA PrinCipessa IN CLARentiâ Comitissa, and
DE CLARENCIA.

There are three singular things about this coin.
(1) The extreme baseness, as the official coins of Achaia were to be of the standard of $2\frac{1}{2}$ oz. to the libra.

² Rodd, *Princes of Achaia*, i. 208.

³ *Ibid.*, i. 279.

⁴ Schlumberger, *Num. de l'Orient*, p. 293.

⁵ *Ibid.*, p. 312.

(2) The use of **DE**, which does not appear earlier than 1285 on the Achaian deniers of Charles II of Anjou.
 (3) The **C**'s and **E**'s, some of which are closed, the closed letters appearing in the time only of Prince Florent (1289). On the other hand, if I have rightly read the name, it is not clear that any one else had a better right to strike than Anna Comnena, a parallel case being the deniers struck by another Greek Princess, Helena Angela, for her dower-half-fief of Carytena.

I acquired a lot of 33 deniers at Athens, some of which are most peculiar:

- 4 of Helena Angela, daughter of John I of Neopatras.
- 11 of Nicolas of Campobasso.
- 2 of James Prince of Morea?
- 1 with **CIVITAS LV . . .** on reverse.
- 1 with **DNS(?)ILADENSIS** and Clarenza reverse.
- 14 blundered imitations of Guy II of Athens, one having **TORNES NAS(?)R** on reverse.

The coins of Helena Angela have long been identified by Lambros as struck for the dowry-fief of Carytena in the Morea left her by her second husband Hugo de Brienne after 1291. In connexion with these it is a significant fact, if I have rightly attributed the denier to Anna Comnena, that the only coins struck for dowry-fiefs have both been those of Greek princesses, those struck by Frankish princesses having been done so by right of succession.

The deniers of Nicolas da Campobasso have been a puzzle, as there was no fief of that name in Greece. The attribution to the Count of Montforte (Molise in the kingdom of Naples) is 150 years too late. One

in the Thomsen collection is combined with Florent de Hainault, Prince of Achaia 1289-97, which is the most probable period.⁶ It may be that an earlier count coined for some Morean fief, or as seigneur in his Neapolitan domain with a type suitable for Eastern trade. The two deniers reading **JACOBVS** differ; one reads—

+IACOBVS ⊗ MOR(?)CA. Cross.

CIBOSA CIVI. Châtel. (Overstruck on **TOLOSA CIVIS.**) (Pl. IV. 2)

the other—

+IACOBVS ⊗ MOR(?)II. Cross, pellet in centre.

CIBANI SIVIS. Châtel. (Pl. IV. 3.)

On the grounds of style they may be dated about 1344, and by the reverse mint-name seem to belong to the Morea. **CIBANI** would appear to me to be a late and corrupt form of **THEBANI** due to the dynastic changes, and to the fact that no Spaniard could pronounce **TH**. The Latin races changed Athens into Satines, Thebes into Estives, Delos into Sdili, Siphos into Sifanto, Chios into Syos, &c., &c. **CIBOSA** may be explained by the fact that it is the remains of **TOLOSA**; **CIBANI** having probably been overstruck on a coin⁷ of Alphonse of France with a reverse **TOLOSA CIVIS**. The **CI** is plain, the **B** scarcely covers an **L**, the **OSA** has not been obliterated, the **I** of **CIBANI** is visible between the **S** and **A** of **TOLOSA**, and the final **S** of **CIVIS** is to be seen

⁶ Schlumberger, *Num. de l'Orient*, see footnote 4, p. 357.

⁷ Poey d'Avant, *Mon. Féodales*, pl. LXXXI. 8. The kings of Majorca were Seigneurs of Perpignan, and must have had transactions with Toulouse.

under the I of **CIVI**. The two reverses therefore should be nearly identical, except that one has **CIVI**, the other **CIVIS**. The obverses both read **IACOBVS** followed by a rosette; the overstruck reverse denier has **MORCA**, the **R** not clear, the other **MORII**, the **R** not clear. Whether the two latter words stand for Majorca or Morea it seems difficult to say, but if the town on the reverses is really Thebes I suggest that these coins are limited to a James connected with Athens or the Morea in the early part of the fourteenth century. The conquest of the Duchy of Athens by the Catalan Company had, I believe, destroyed the strict distinction between Achaia and Athens (the latter was feudally claimed as dependant on the former), and the later pretenders often described themselves as Princes of Morea. The Infante of Majorca, Ferdinand, married Isabella de Sabran, through whom he claimed Achaia "de jure uxoris", and struck deniers as Prince at Clarenza, which he held against Louis of Burgundy for a year. The romantic story⁸ of his baby son secretly taken to Perpignan by Muntaner on the defeat of Ferdinand's forces is too well known to repeat here. I suggest that these two deniers were struck by this son of Ferdinand called James for the Morea, he being the third king of that name in Majorca (1324-43). His return to Greece when of age in 1344 to claim his father's patrimony was probably in consequence of the fact that he was then being gradually despoiled of the throne of Majorca by Pedro IV of Aragon without hope of recovery, and was inclined to fresh adventures in some other quarter.

⁸ Miller, *Latins in the Levant*, p. 254.

Many important Achaian nobles had from 1338 to 1344 made overtures to him,⁹ the powerful Bishop of Patras heading the list, whilst Venice was certainly on his side.¹⁰ James of Majorca actually appointed Lenoir¹¹ as his hereditary Marshal for the Morea in 1345, but never saw his new possessions, being killed fighting against the Aragonese in 1349. It is noticeable that his son James IV, titular King of Majorca, was called Infante of Clarenza.¹² If my attribution is correct, James III of Majorca was therefore a pretender to the Morea in opposition to John II of Aragon-Randazzo, King of Sicily, and suzerain of the Duchy of Athens then occupied by the Catalan Company, and also to Catherine de Valois, regent for her son Robert de facto Prince of Achaia. This latter lady died in 1349, leaving her son in the midst of critical times in the hands of the Accajuoli, the rich bankers of Florence, destined afterwards to rule as Dukes of Athens. It is somewhat surprising that James should have stamped his coins with Thebes rather than Clarenza, but as he probably claimed both Athens and Achaia, and as his father obtained his successes in Achaia owing to his Catalan adherents, the choice of Thebes for his mint is quite possible.

The next denier to describe has the reading on obverse **CIVITAS LV** (Pl. IV. 4). A better specimen is needed here, but if it is struck by the lords of Cephalonia, it suggests Lucate (Leukas), a fief given by Nikephorus of Epirus to John of Cephalonia about

⁹ Rodd, *Princes of Achaia*, ii. 187.

¹⁰ *Ibid.*, ii. 188.

¹¹ Schlumberger, *Num. de l'Orient*, p. 304.

¹² Heiss, *Monedas Hisp. Christ.*, ii. 218.

1292.¹³ There is also a denier struck at Clarenza reading **DRS** (not clear) **ILADENSIS**, about which I can make no suggestions. (Pl. IV. 5.)

The last of the lot of deniers which were sold together is the group which resemble the coin figured by De Saulcy,¹⁴ and one in Thomsen's catalogue.¹⁵ These have obvious prototypes in **CVI DVX ATENIS** and reverse **THEBANI CIVIS**. One, however, has the legend **TORNESNASR** (the **S** not clear), the reverse being like the others—a corruption of **THEBANI CIVIS**. (Pl. IV. 6.)

The word "Tornes" must be later than the French occupation, Clarenza having been renamed "Castel Tornes", and the deniers at a late date were called "Torneselli piccioli" by Pegalotti.¹⁶ The whole class may have been struck by some seigneur in the beginning of the fourteenth century in Greece.

Hitherto no coins have been given to Constantine the Sebastocrator of Neopatras, son of John Angelus the Bastard. The latter, who was the illegitimate son of Michael II, despot of Epirus, created the state of Neopatras or Grande Vlachie. Two coins are assigned to him¹⁷ on which the emblems of a wing appear, the badge of the Angeli. Just before the death of John Angelus, Constantine and Angelus, two of his sons, had utterly routed their uncle the despot of Epirus; a quarrel having arisen owing to the treachery of the latter, whereby their elder brother Michael had been lured into the hands of the Emperor Andronicus II.

¹³ Miller, *Latins in the Levant*, p. 181.

¹⁴ *Num. Croisade*, xviii. 11.

¹⁵ Thomsen, *Cat.*, No. 1591.

¹⁶ Schlumberger, *Num. de l'Orient*, p. 311.

¹⁷ B.M. *Cat.*, xxxi. 12. Schlumberger, *xiii.* 22, 23.

On the death of John Angelus in 1296 the two brothers were associated on the throne, and later had to make peace with Epirus, owing to fresh assaults from the Imperial party. This treaty enabled the brothers to come to terms with Andronicus II, and a marriage was arranged between Angelus and Theophania, sister of the Empress Maria. The death of the bride, however, caused a resumption of hostilities, and the brothers seem to have been continually at war with the Empire and Epirus until the death of Constantine in 1303. He left a son, an infant, John Angelus II, as heir under the protection of the Megaskyr Guy II, Duke of Athens.

There is a bronze nomisma in my collection acquired in Turkey, of which the reverse is almost identical with that of John the Bastard.¹⁸

Obv.—Horseman to right; a banner in left hand; a volumen(?) in right; a wing(?) in the field r.;
KΩN-TANT-IN in three lines in the field l.

Rev.—Our Saviour seated **IC-[XC]** above. (Pl. IV. 7.)

The extraordinary resemblance between the reverse of this coin and that of John Angelus I suggests that this piece may be struck by Constantine of Neopatras, though it might have been expected that the name of Angelus ought to be associated with his, as they were joint Sebastocrators.¹⁹

The type of a horseman also is an innovation one would not expect, derived from Seljuk, Georgian, and Armenian coins (twelfth century). It became the principal type of Trebizond late in the thirteenth-

¹⁸ B.M. Cat., xxxi. 12.

¹⁹ Schlumberger, *Num. de l'Orient*, p. 381, says he had no real authority, though associated on the throne.

century, and perhaps was adopted by Constantine in consequence of his dislike of all the Greek contemporary rulers, with most of whom he was continually at war. Constantine's will certainly led to the disappearance of the Byzantine type, and the adoption of the Frankish denier type by his successor John Angelus II. There is a bronze nomisma in my collection which does not appear to be of Imperial Byzantine style, the reverse reading **Μ(?)** and showing the dynast with an enormous patriarchal cross in right hand. Mr. Hill read the obverse as **ΟΑ-ΙΟC-ΔΗΜ-ΤΙΟC** (Pl. IV. 8). This coin resembles the coarse style of Neopatras, and may possibly be struck by Michael I Angelus of Epirus (1205-1214), or else by Michael VIII Palaeologus for Nicaea before his conquest of Constantinople; the former seems most likely owing to the name of the saint.

GRANTLEY.

IV.

ON A NEW TYPE OF PENNY OF EDWARD THE FIRST.

(PLATE IV. 9.)



FORTUNE has once more favoured me by enabling me to introduce to the Society an entirely new English silver coin. A coin, moreover, which can at once be assigned its proper place in our series of English coins. The description of it is as follows:

Obverse.—King's head crowned, facing, very little neck showing, and quite undraped. The crown consists of a single band, but it is just possible that there was a very thin groove cut along its length. The central ornament is a well-marked strawberry leaf, not a fleur-de-lys. The side ornaments are half the same leaf. There is no ornament between the central leaf and the side leaf on either side. Hair is shown below the crown as a series of short vertical strokes. The side locks are divided into two parts, the upper standing away from the head, and the lower curling down the king's face. The head is completely contained within an inner circle which might almost be called grained,

certainly not dotted. Outside this circle the legend is ED' REX:ÆNGL'[:?] DN[S hY]B€. Mint-mark a cross pattée above the king's head. Two pellets colonwise divide the words except between ÆNGL and DNS. The stops after DNS are not visible as this part of the coin is somewhat rubbed. Traces of an outer circle may be discerned.

Reverse.—A long double cross extending to the edge of the coin. A small full-blown rose showing five petals in each angle of the cross. An inner circle, grained as on the obverse. Legend EDVV|ÆRDV|SDEI|GRÆ. Traces of an outer circle. The letters on both sides agree with each other in form. The coin is of the general size of the early pennies of Edward I, its weight is 19.7 grs. A comparison with known coins of Edward I easily settles the time of issue, and perhaps the position of the new coin in relation to the group described by Messrs. Fox as group I (*B.N.J.*, vol. VII). That group as far as pennies are concerned contains four subdivisions:

Legend on obverse:

- (a) EDW REX ÆNGL'DNShYB
- (b) ED REX: ÆNGLIEDNSHIBN
- (c) EDW: REX: ÆNGL: DNS: hYB
- (d) EDWR' ÆNGL'DNS LYB

The legend on the reverse in all cases is CIVI TAS LONDON.

The N's when square vary in barring, right to left or left to right, and on the coins bearing stops these vary in number, one or two between the words. Frequently there is only a stop, a single pellet, between DNS and hYB.

Now the new coin agrees with (b) and (c) in having

these pellet stops. It agrees with (a) in having round *N*'s. As to the abbreviation of the king's name on the obverse, *ED*, it also falls into line with (b), and again with (b) as to the short undraped neck. As to hair showing under the crown, it differs from (a) which has no hair in this position, and agrees with (b), (c), and (d) in this respect. The strawberry leaf ornaments, the side locks on the obverse, and the whole reverse are absolutely new. The inspiration of the designer of the reverse is not, however, far to seek; when a new coinage in 1279 was decided on, he obviously had in view the reverse of the gold penny of Henry the Third; here we get the long double cross with a rose in each angle, but the gold penny has three pellets round each rose. The reverse legend, repeating the king's name, is perhaps the most extraordinary part of this extraordinary coin. One imagines, when the long-cross issues came to an end in 1279, and the moneyers' names were for the first time removed from the coins, that the authorities were at a loss for a new reverse legend, and finally adopted the mint name preceded by *QIVITVS* or *VILLT*. Evidently the reverse legend on this new piece was not satisfactory as it showed no mint name.

The same curious feature, it will be remembered, occurs on the earliest form of the long-cross coins, the obverse reading *HENRICVS REX*, and the reverse *ANGLIE TEROI*, omitting both the names of the mint and of the moneyer Nicholas de Sancto Albano. These two first issue coins, as may be expected, are of considerable rarity, the Edwardian piece being so far unique. The reason of the withdrawal is not far to seek, and is perhaps the same in both cases, viz.

the impossibility of bringing a moneyer to book in case of abuse. That both coins were struck in London there can be no doubt, as the irons used in their making agree accurately with those used immediately afterwards on the pennies with the ordinary inscriptions. Another plausible reason for the absence of this new coin from all our numerous finds of Edward I is its rejection from currency for fear of the gilding and passing of it as a gold penny owing to the similarity of its reverse type.

It has been suggested that this coin might have been made as a pattern for a gold coin. It appears to me in the first place unlikely that a silver pattern would have been made at that period for a gold coin, I know of no parallel case; secondly, that the coin has evidently been in circulation; thirdly, that the striking of a gold coin identical in size and in design of obverse with current silver would be too obviously dangerous for even a pattern to be made for this purpose; fourthly, that there is no reason to suppose that there was any thought of issuing a gold coinage until sixty years later, the coinage of the Gold Penny had ceased because it was a failure.

It is interesting to note that this reverse design appears on Luxemburg sterlings (or *quarts de gros*) of Henri VII (1288-1309), and a similar reverse with single instead of double cross on sterlings of Loos and Lippe (see Chantard, *Imitations des Monnaies au Type Esterlin*, Plates XIV. 1, 2; XIII. 1; XXVIII. 8). These Continental pieces suggest that a coin of this type was actually put into currency in this country and imitated later on the Continent.

L. A. LAWRENCE.

V.

A HOARD OF FOREIGN STERLINGS FOUND AT GALSTON.

(PLATE IV. 11-16.)

As a rule, those Scottish finds which date from the days of the early Edwards contain an appreciable admixture of sterlings from the Low Countries. The proportion varies, but rarely rises as high as 10 per cent. More than seventy years ago, however, Edward Hawkins described to the Society a hoard which had come to light near Kirkcudbright, and which was almost entirely composed of "counterfeit sterlings"; there were 92 of these as against 1 penny of Alexander III, 1 of Henry III, and 5 of Edward I, the last including a barbarous imitation of the Edwardian pennies minted in Ireland.¹ So far as I am aware, this curious hoard has hitherto stood alone.² I am now in a position to give an account of another of precisely similar character and of more than double the size.

On 6th September last John Cochrane, son of

¹ *Num. Chron.* xiii (1851), pp. 86-94.

² A "parcel" of thirty-two was described some years later by Mr. J. B. Bergne in *Num. Chron.* xviii (1856), pp. 121-9. But it is not really analogous. Some of the coins were waifs and strays. The majority (twenty-five) had been purchased from a bullion dealer in Cork, who said that he had bought them from a countryman. This is too vague to be of any value. Bergne's suggestion that they may have belonged to the same find as the Kirkcudbright pieces is in the last degree unlikely.

Matthew Cochrane, farmer at Auchenbart in the parish of Galston, Ayrshire, was engaged repairing drains in a field on the farm. While digging in a mossy part of the ground, he noticed what looked like silver coins in the soil which he was turning over. A closer examination of some of the objects that had attracted his attention confirmed his opinion, and on clearing a little more of the earth away he discovered a small jug of ordinary ware. Lifting it out, he found that it was broken but that it still contained about 170 coins. A further search enabled him to pick up 70 or 80 more which were lying loose. These round figures indicate a total of 240 or 250. But this may be too large. The number which the King's and Lord Treasurer's Remembrancer forwarded to the National Museum for examination and selection was 216, and I had previously had an opportunity of seeing 12 others which had passed into private hands before the Crown authorities had time to lodge their claim.

The following description, therefore, covers 228 specimens. Not a single one of these was Scottish; 7 were pennies of Edward I of England; the remaining 221 were foreign sterlings. Mr. L. A. Lawrence has been good enough to help me with the exact classification of the Edward pennies. In dealing with the sterlings I have, of course, been guided mainly by Chautard's *Imitations des monnaies au type esterlin*, but in cataloguing two or three rare or unique varieties I have received generous and most valuable aid from M. E. Bernays of Antwerp, whose own splendid collection of these pieces has just been presented to the Belgian nation. Little detailed discussion

is called for. It will, I think, prove that the list is, for the most part, self-explanatory. References to Chautard's book are given throughout. Where no such reference appears, it may be inferred that the particular variety is not recorded there. The differences are sometimes very minute. On the other hand, occasionally they are important.

PENNIES OF EDWARD I.

Class III (c. 1280-81).

Mint of London	2
Mint of Canterbury	2
Mint of Durham (Robert de Insula)	1

Class IV (c. 1282-90).

Mint of Canterbury	1
--------------------	---

Contemporary Forgery.

With CIVI TAS DVN DOM	1
	7
	—

FOREIGN STERLINGS.³

"COUNTY" OF FLANDERS.

Gui de Dampierre (1280-1305).

Mint of Namur.

1. *Obv.*—✠MARCHIONAMVRC Head bare.

Rev.—GCO MÆS FLA DRÆ 4

Chautard, p. 5, No. 1.

³ Except where it is otherwise stated, the types are those of the ordinary sterlings.—*Obv.* Bust, with head facing. *Rev.* Long cross, with three pellets in each angle.

2. *Obv.*—Similar, with H.

Rev.—Similar.

13

Cf. Chautard, p. 5, No. 1.

3. *Obv.*—Similar to 1, with saltire on either side of bust.

Rev.—Similar.

3

Chautard, p. 5, No. 4.

4. *Obv.*—Similar to 3, with H.

Rev.—Similar, with E or G for F; five-rayed star instead of pellets in fourth quarter. 4

Chautard, p. 5, No. 5.

5. *Obv.*—Similar.

Rev.—GCO IIES FLA DRE Open quatrefoil, instead of pellets, in third quarter. 6

Chautard, p. 6, No. 6.

6. Similar, with GCO.

3

Cf. Chautard, p. 6, No. 6.

—

33

—

Mint of Douai.

1. *Obv.*—✠G'COMESFLANDRIE Head rose-crowned.

Rev.—MON ETT DOV VTY

1

Cf. Chautard, p. 6, No. 7.

Mint of Alost.

1. *Obv.*—✠✠G✠COMESFLANDRIE✠ Two-headed eagle.

Rev.—✠CIV ITA S'AL^o OST

1

Cf. Chautard, p. 7, No. 8.

2. *Obv.*—Same inscr. Usual type; head rose-crowned.

Rev.—Similar. 1

Chautard, p. 7, No. 10.

3. *Obv.*—✠_xG_xCOMES-FLANDRIE^o Head bare.

Rev.—ALO STC IVI TAS 1

3

Uncertain Mint.

1. *Obv.*—✠G:COMES:FLANDIE Head rose-crowned.

Rev.—SIG NVMI CRV CIS 9

Cf. Chautard, p. 8, No. 11.

2. *Obv.*—Similar, with _x instead of :

Rev.—Similar. 5

14

"COUNTY" OF HAINAUT.

Jean d'Avesnes (1280-1304).

Mint of Valenciennes.

1. *Obv.*—✠_xI_xCOMES_xhANONIE Head rose-crowned.

Rev.—VAL ENQ hEN ENS' 3

Chautard, p. 18, No. 24.

2. *Obv.*—Similar, with hANONIE

Rev.—Similar. 1

3. *Obv.*—✠_xI_xCOMES_xhANONIE Head rose-crowned.

Rev.—VAL ENQ hEN ENS 3

Chautard, p. 18, No. 26.

4. *Obv.*—Similar, with \times at end of legend.
Rev.—Similar. 1
5. *Obv.*—Similar to 1.
Rev.—Similar to 3. 3
6. *Obv.*—Similar to 1.
Rev.—VTL ENQ hEN ENS' 1
7. *Obv.*—✠I:COMES:hAVONIE Head rose-crowned; pellet on King's breast.
Rev.—VTL ENQ hEN ENS' 5
 Cf. Chautard, p. 18, No. 27.
8. *Obv.*—Similar.
Rev.—Similar, with L 5

 22

Mint of Mons.

1. *Obv.*—✠xIOhSxCOMESxhANONIE Head rose-crowned.
Rev.—MON ETÀ MON TĒS 16
 Cf. Chautard, p. 18, No. 29.
2. *Obv.* ✠:I:COMES:hAVONIE Head rose-crowned; pellet on King's breast.
Rev.—MON ETÀ: MON TĒS: 8
 Cf. Chautard, p. 19, No. 33.

 24

Mint of Maubeuge.

1. *Obv.*—✠xI:COMESxhANONIE Head rose-crowned.
Rev.—MELI BOD IEN SIS 1
 Cf. Chautard, p. 20, No. 36.

2. *Obv.*—†×I×COMES×hAYONIE Head rose-crowned.

Rev.—MEL BOD IEN SIS 14

Cf. Chautard, p. 20, No. 38.

—
15
—

"COUNTY" OF NAMUR.

Gui de Dampierre (1263-97).

Mint of Namur.

1. *Obv.*—†×G×MARCHIONAMVR Head bare.

Rev.—×MO NET ANT MVR 3

Chautard, p. 26, No. 50.

2. *Obv.*—†×G×MARCHIONAMVR

Rev.—Similar. 1

3. *Obv.*—†×G×MARCHIONAMVR

Rev.—×MO HET ANT MVR 1

—
5
—

HAINAUT AND NAMUR.

"Enigmatic" Sterlings.

1. *Obv.*—†×IOhS×DOMES×hANONI Head rose-crowned.

Rev.—×DIVI TAS LON DON 1

Cf. Chautard, p. 40, No. 74.

2. *Obv.*—†×I×COMES×hANONIE Head rose-crowned.

Rev.—×MO NET ANT MVR 1

Cf. Chautard, p. 42, No. 77.

3. *Obv.*—✠✠G✠MARCHIO✠NAMVR✠ Head bare.
Rev.—MON ETA MON TES 1
 Cf. Chautard, p. 42, No. 80.
4. *Obv.*—✠MARCHIONAMVRC
Rev.—HOD MOI SAT IVID 1
-
- [Pl. IV. 11.] 4
-

The *Rev.* legend of No. 4 is obviously copied from that of a London penny.

DUCHY OF BRABANT.

Jean I (1261-94).

Uncertain Mint.

1. *Obv.*—✠✠✠DVX✠LIMBVRGIE Head rose-crowned.
Rev.—DVX BRÄ BÄN TIE 21
 Cf. Chautard, p. 57, No. 95.
2. *Obv.*—✠I°DVX°LIMBVRGIE° Head rose-crowned.
Rev.—DVX BRÄ BÄN TIE 10
 Chautard, p. 57, No. 96.
3. *Obv.*—✠IDVX°LIMBVRGIE° Head rose-crowned.
Rev.—DVX BRÄ BÄN TIE° 2
4. *Obv.*—✠I°DVX° LIMBVRGIE° Head rose-crowned.
Rev.—Similar to 2. 6
 Chautard, p. 57, No. 97.
5. *Obv.*—✠IDVX ⊗ LIMBVRGIE ⊗ Head rose-crowned.
Rev.—Similar to 3. 1
-

Mint of Maestricht.

1. *Obv.*—†I:DVX:LIIMBURGIE Head rose-crowned.
Rev.—+MO NET TTR EIT 1
 [Pl. IV. 12.]

Cf. De Witte, *Monnaies des ducs de Brabant*, p. 82, Pl. X, No. 258 (Coll. of M. Dumoulin). This is an extremely rare coin. The Kirkcudbright find contained a badly preserved specimen (*Num. Chron.* xiii, p. 92), which Hawkins was disposed to attribute to Trèves. Chautard (p. 58, No. 100), in recording the Kirkcudbright example, suggested Maestricht as more probable.

Mint of Brussels.

1. *Obv.*—†I:DVX:BRABANTIE Head rose-crowned.
Rev.—BRV XEL LEM SIS 1
 Chautard, p. 58. No. 101.

BISHOPRIC OF LIÈGE.

Hugues de Châlon (1296–1301).

Mint of Statte (Huy).

1. *Obv.*—†MONETA:LESTAT Head rose-crowned.
Rev.—hVG OMI SEP ISC 1
 Cf. Chautard, p. 69, No. 119.

Mint of Fosses.

1. *Obv.*—[†EPISQ]OPVS:LEODIEN Head rose-crowned.
Rev.—[MON] ATT FOS [SAS] 1
 [Pl. IV. 13.]

This is another very rare coin. It is not recorded by Chautard. M. Bernays tells me that three other examples are known—one in the collection of the city of Liège, another in the cabinet of M. le Vicomte de Jonghe at Brussels, and a third in the collection of the late M. Naveau at Bommershoven. The Galston specimen is not in very satisfactory condition.

SIGNORY OF HERSTAL.

Jean I of Louvain (1285-1309).

- | | | | |
|--|------|---------------|----|
| 1. <i>Obv.</i> —✠IOHES ^o DE ^o LOVANI ^o | Head | rose-crowned. | |
| <i>Rev.</i> — ^x DNS DE ^h ARS TEL | | | 2 |
| Cf. Chautard, p. 78, No. 134. | | | |
| 2. <i>Obv.</i> —Similar. | | | |
| <i>Rev.</i> —MON ET ^h ARS TEL | | | 4 |
| Cf. Chautard, p. 78, No. 135. | | | |
| 3. <i>Obv.</i> —✠IOHANNES ^o DE ^o LOVANI ^o | Head | rose-crowned. | |
| <i>Rev.</i> — ^x DNS DE ^h ARS TEL ^o | | | 3 |
| Cf. Chautard, p. 79, No. 137. | | | |
| 4. <i>Obv.</i> —✠IOHES ^o DE ^o LO[V ^h]NI ^o | Head | rose-crowned. | |
| <i>Rev.</i> —[MO]N ATT COM ITIS | | | 1 |
| [Pl. IV. 14.] | | | 10 |

No. 4 appears to be a new variety. M. Bernays knows no parallel.

"COUNTY" OF LOOS.

Arnould VIII (1280-1328).

1. *Obv.*—✠MONETACOMITDELO Head bare.
Rev.—COM EST RNO LDVS 1
Chautard, p. 88, No. 143.
2. *Obv.*—✠MONETACOMITDELO Head bare.
Rev.—Similar. 1
3. *Obv.*—✠COMES & ARNOLOVS Head bare.
Rev.—MON ETIA COM ITIS 7
Cf. Chautard, p. 88, No. 146 (*obv.*), and
No. 147 (*rev.*).
4. *Obv.*—✠COMES & ARNOLOVS Head bare.
Rev.—Similar. 8
5. *Obv.*—Similar, with A and E
Rev.—Similar. 2
6. *Obv.*—✠ARNOLOVS & COMES Head bare.
Rev.—Similar, but with three rosettes, instead of
three pellets, in second quarter. 2
7. *Obv.*—✠COMES & ARNOLOVS Head bare.
Rev.—Similar to 3. 2
Chautard, p. 88, No. 148. On one of the two
specimens the stops are obscure.
8. *Obv.*—Similar, with E
Rev.—Similar. 1

"COUNTY" OF LUXEMBURG.

Henry IV (1288-1309).

1. *Obv.*—✠HERRICVCOMESLVCÆBVR Head rose-crowned.

Rev.—MTR CHI DER LOH 1

[Pl. IV. 15.]

This is a unique and very interesting piece. Curiously enough, the Kirkeudbright hoard also contained a unique sterling of Henry IV (*Num. Chron.* xiii, p. 93; Chautard, p. 106, No. 167). Henry was elected Emperor in 1308, with the title Henry VII, crossed the Alps in 1310 "*a drizzare l'Italia*",⁴ and died in 1313 at Buonconvento near Siena.

BISHOPRIC OF CAMBRAI.

Guillaume de Hainaut (1292-6).

1. *Obv.*—✠GVILLS·EPISCOPVS Head rose-crowned.

Rev.—QAM ERA QEN SIS 3

Chautard, p. 139, No. 209.

2. *Obv.*—✠GVILLS·EPISCOPVS Head rose-crowned.

Rev.—Similar. 1

Chautard, p. 140, No. 210.

3. *Obv.*—Similar.

Rev.—QAM ERA QEN SIS 3

4. *Obv.*—✠GVILLS·EPISCOPVS Head rose-crowned.

Rev.—QAM ERA QEN SIS 3

⁴ Dante, *Paradiso*, xxx. 137. The poet's enthusiasm for the enterprise, which ended in complete failure, had been unbounded.

5. *Obv.*—GVILLIS ☸ EPISCOPVS Head rose-crowned; pellet on breast; instead of the usual cross, the m.m. is a mitre.

Rev.—CAM ERA CEN SIS Instead of pellets, there is a mullet of five points in the first quarter and trefoils in the other three.

1

[Pl. IV. 16.]

11

There was a specimen of No. 5 in the Kirkcudbright hoard (*Num. Chron.* xiii, p. 87), and another is described by Chautard, p. 140, No. 214. Chautard's text takes no notice of the peculiar m.m., but it is clearly shown in his plate (xvii. 6).

Gui de Collemède (1296-1306).

1. *Obv.*—✠GVIDO EPISCOPVS Head rose-crowned.

Rev.—CAM ERA CEN SIS

1

Chautard, p. 141, No. 216.

2. *Obv.*—✠GVIDO EPISCOPVS Head rose-crowned.

Rev.—Similar.

5

Chautard, p. 141, No. 217.

3. *Obv.*—Similar, with E

Rev.—Similar.

3

9

Capitular Coins (1296-1300).

1. *Obv.*—✠MONETA & CAPITVLII Head rose-crowned.

Rev.—CAM ERA CEN SIS Instead of pellets, there is an eagle in first quarter. 1

Chautard, p. 143, No. 220.

2. *Obv.*—Similar, with : at end of legend; rosette obscure.

Rev.—Similar. 1

2

In the case of some of the coins—notably perhaps those of Jean d'Avesnes—the superficial skin of silver has been very thin, and the effect of the cleaning process has been to make the copper core show up very strongly. The quality all over seems to be a good deal poorer than that of contemporary English and Scottish money. The date at which the hoard was concealed can be determined within fairly narrow limits. The *terminus post quem* is 1296, in which year Hugues de Châlon and Gui de Collemède, both of whom are represented in the find, became bishops of Liège and of Cambrai respectively. The *terminus ante quem*, though less clearly marked, can hardly be more than ten or twelve years later. The latest of the Edward pennies was minted before 1291, and there were no sterlings of Gaucher de Châtillon (1303-29) or of Robert de Béthune (1305-22), both of whom appeared at Lochmaben⁵ as well as at Blackhills.⁶ We may safely say that the jug was buried *circa* 1300. At

⁵ *Num. Chron.* 1905, pp. 81 f.

⁶ *Ibid.* 1913, pp. 114 ff.

that time the state of Southern Scotland was, of course, notoriously disturbed. A detailed comparison with the contents of the Kirkcudbright *cache*⁷ suggests that it belongs to the same period. The only doubt arises from the presence at Kirkcudbright of a badly preserved sterling, on which Hawkins read LODDVIC . . . MGS,⁷ and which Chautard⁸ was consequently led to assign to Louis IV of Loos (1328-36), son and successor of Arnould VIII. With this single exception the lists of the princes, whose sterlings occur in the two finds, are absolutely identical. It is, therefore, conceivable that Chautard's attribution may be wrong.

GEORGE MACDONALD.

⁷ *Num. Chron.*, 1851, p. 93.

⁸ p. 91, No. 157.

VI.

PORTUGUESE JETTONS.

(SEE PLATE V.)

WHEN I wrote my book, *The Casting-Counter and the Counting-Board*,¹ among the many thousands of jettons found in England that had passed through my hands or into my cabinets Portugal was represented by only four. In Meili's great collection of Portuguese coins, medals, and jettons, consisting of nearly 4,000 pieces,² there were but sixty-three of these rare casting-counters. The pick of them have recently come into my possession. The remainder of my seventy-five examples consist either of better specimens of Meili's inferior ones, or of others which were not represented at all in his collection. As these jettons from the Peninsula are so little known in this country, are "still almost a virgin study"³ anywhere, and have

¹ Clarendon Press, Oxford, 1916.

² Catalogued in *O Archeologo Português*, Lisbon, 1900, pp. 54-64. The descriptions there given, however, are very meagre, and in some cases inaccurate. There is no attempt to explain either the types or the legends. In the famous Rouyer collection of jettons, now in the Bibliothèque Nationale at Paris, among 5025 pieces there was but one Portuguese *conto*: a variant of No. 26 below. Neumann, in his list of over 40,000 copper pieces (*Beschreibung der bekanntesten Kupfermünzen*, Prague, 1858-72), describes only ten (ii, pp. 229-30). The British Museum possesses fourteen. Seventy of my seventy-five I acquired from M. Schulman, of Amsterdam, the remaining five I found in this country.

³ J. Leite de Vasconcellos, in *O Archeologo Português*, 1900, p. 52.

their special points of interest, the following account of them may be acceptable.

The Portuguese casting-counter was in use during the second half of the fourteenth, the fifteenth, and the first three quarters of the sixteenth centuries.⁴ Thus Portugal was later than France, where the jetton was introduced about 1200, or a little before.⁵ After the annexation of Portugal by Philip II of Spain, in 1580, the native Portuguese counters ceased, their place presumably being taken by importations from the mints of the Spanish Netherlands; and by the time that Portugal recovered its independence, sixty years later, manual arithmetic had apparently gone out of fashion there: at any rate the national issue does not appear to have been revived. This collection, therefore, illustrates fairly well the whole of the Portuguese series, the short reign of Edward (1433-8) alone being unrepresented.

The early Portuguese press is not known to have published any work on casting with counters, or, indeed, any on arithmetic at all.⁶

All the jettons in this list are Æ except Nos. 6, 26, 28, 33, and 62, which are latten. Modules are given according to Mionnet's scale, with the addition of a half-measurement.

1. *Obv.*—The five escutcheons of Portugal arranged in cross within a granulated inner circle. *Legend.*

⁴ J. Leite de Vasconcellos, *ibid.*, p. 53, who adds another century, but he must be including the Low Country counters referred to below. See, too, Aragão, *Descrição geral das moedas de Portugal*, 1875-80, i, p. 245, note.

⁵ France led the way: Barnard, *op. cit.*, p. 25, and A. Lisini, *Periodico di Numismatica e Sfragistica*, Florence, 1874, vi, pp. 286-97.

⁶ See D. E. Smith, *Rara Arithmetica*, Boston, U.S., 1908.

Ave Maria Grasia. *Rev.*—A short cross pattée within a plain inner circle. *Legend* (continued from the *obv.*). **PL[us] DOMIN[u]S T[er]rum.** Size 5. Schulman, Cat. 76, No. 2210,⁷ which is this specimen; variant of Meili, No. 1.⁸ Jetton of the reign of Ferdinand (1367–83). The legends give the opening words of the *Ave Maria*. Early Portuguese casting-counters, like the corresponding French and English jettons, follow, with differences of detail, certain of the coin-types of their country. The obverse of this piece resembles that of the *Meio Tornes* of Ferdinand,⁹ the reverse that of his *Meio Real*.¹⁰ The obverse type of course represents the original arms of Portugal, which were *Argent, five escutcheons in cross azure, on each as many plates in cross*. The five roundels¹¹ on each escutcheon were supposed to commemorate the victory of Alfonso I over five Moorish kings¹² at the battle of Ourique in 1139.¹³ The bordure of Castile, *Gules, thereon seven castles or*, an augmentation denoting alliance with the royal house of Castile, dates from the marriage of Alfonso III with Beatrice

⁷ Oct., 1921: *Monnaies de Portugal*, &c.

⁸ *Contos para contar* ("Counters for casting"): Collecção de Julio Meili in *O Archeologo Português*, 1900, pp. 52–64.

⁹ See Aragão, *op. cit.*, i, Pl. VI, No. 46.

¹⁰ *Ibid.*, Pl. IV, No. 8.

¹¹ *Las quinas reales*, "The five silver pieces."

¹² Really only provincial emirs.

¹³ Spener, *Historia Insignium*, Frankfurt, 1680, i, p. 181, § V; Capaccio, *Delle Imprese*, Naples, 1592, Lib. I, fol. 17, *verso*. Other explanations, of the usual fanciful nature that characterized the times, cited by Spener, are that the five shields symbolized five wounds received by Alfonso in the battle, the five wounds of Christ, or six standards captured from the Moors, the larger shield on which the smaller ones are displayed making the sixth.

of Castile in 1256.¹⁴ It does not, however, appear on any of the jettons here described till the reign of John I (1383-1433). It is clear from the evidence of seals, coins, counters, and other heraldic records, that originally the number of castles in this bordure was unfixed,¹⁵ and on the jettons now under consideration there is, as we shall see, great variety in this respect.¹⁶ The seal of Denis, King of Portugal (1279-1325), of itself would suffice to prove that in mediaeval times there was no established rule in the matter: the obverse shows eight castles, the reverse fourteen.¹⁷ The shield at Canterbury (c. 1391-1411) has nine.¹⁸ *L'Armorial du Héraut Geldre*¹⁹ (fourteenth century), No. 348, gives seven. The Garter-plate of King Edward (1433-8), at Windsor, shows seventeen, and that of King John II (1481-95) ten.²⁰ As to coins, the castles, when they appear, on money of Ferdinand, usually number four, sometimes eight; on the issues of John I they are always four; on those of Edward generally four, occasionally eight; on those of Alfonso V as a rule four, but eight and ten are found; on those of John II, and Emanuel sometimes four, ordinarily seven; on those of John III for the most

¹⁴ Anstis, *Register of the Order of the Garter*, 1724, ii. 193; Notes on Planché's Roll, No. 25, in *The Genealogist*, N.S., vi, p. 154.

¹⁵ "Non tamen definito castellorum numero": Spenser, i, p. 282, § VI.

¹⁶ The numbers found are 4, 7, 8, 9, 10, 11, 12, and 14.

¹⁷ Birch, *Seals* (1907), Pl. li, Nos. 6, 7.

¹⁸ "Heraldry in the Cloisters of Canterbury Cathedral," *Archæologia*, vol. 66, p. 550; Willement, *Heraldic Notices of Canterbury Cathedral*, 1827, p. 140.

¹⁹ Edited by Bouton, Paris and Brussels, 1881.

²⁰ Hope, *Garter Plates*, 1901, Nos. LIII, LXXXIV.

part seven, though six and eight occur; on Sebastian's always seven. The settling down to seven seems to have been taking place during the sixteenth century. As late as 1555 Virgil Solis, in his *Wappenbüchlein*,²¹ gives ten. The belief, quoted by Spener,²² that the number seven symbolized the Seven Sacraments of the Church had, therefore, no relation to the original charge, but was one of those conceits dear to post-mediaeval armory, which nevertheless may have brought about the limitation to seven.

2. (Pl. V.) *Obv.*—The five escutcheons of Portugal arranged in cross, cantoned by four cinquefoils; all within a granulated inner circle. *Legend.* GASP̄AR: M̄LCH̄IOR:. *Rev.*—A slender cross pattée,²³ with each end flanked by two annulets, cantoned by four cinquefoils; all within a granulated inner circle. *Legend.* ✠ GASP̄AR: M̄LCH̄IOR: B. Size 6. Meili,²⁴ No. 3, which is this specimen. Jetton of the reign of Ferdinand. The obverse legend consists simply of the names of two of the *Tres Magi*, or "Three Kings of Cologne", to which the reverse legend adds the initial of the third, Balthasar.²⁵

²¹ Ed. by Hirth, Munich, 1886, p. 21.

²² i, p. 282, § VI.

²³ This slender cross pattée is found on early Portuguese seals: see e.g. the *Elucidario* of Joaquim de Santa Rosa de Viterbo, 1798, i, 321-2, 324-5; and on many coins of Ferdinand: e.g. Aragão, i, Plates V, VI. It is probably meant for the cross of the Order of Christ, instituted by King Denis in 1320, *A cross pattée gules and superimposed upon it a plain white cross*, which is regularly found in the fully developed form on later money of Portugal.

²⁴ "Meili" here always refers to the publication mentioned in Note 8.

²⁵ See Barnard, p. 209. As to the spelling "Gaspar", C and G were interchangeable in old Portuguese: *Elucidario*, i, 218; ii, 3.

3. *Obv.*—A variant of No. 2. *Rev.*—Similar to No. 2, but there are no annulets at the end of the cross. Size 5. Thin flan. Has been gilt. Schulman, Cat. 76, No. 2212, which is this specimen; Meili, No. 4. Jetton of the reign of Ferdinand.

4. *Obv.*—The five escutcheons of Portugal arranged in cross and cutting a plain inner circle; the cross is cantoned by four cinquefoils and divides the legend. *Legend.* MRR—GLD—QON—IVRQ. *Rev.*—A cross of the Portuguese Order of Christ cantoned by four cinquefoils, within a plain inner circle. *Legend* (continued from the obverse?). ✠ QR: LITON: A BON: SRRVIOQ. Size 5. Thick flan. Schulman, Cat. 76, No. 2213, which is this specimen; *cp. Collection Meili*, Pt. II, No. 2523;²⁶ and *Collection Santos*, No. 2208.²⁷ Jetton of the reign of Ferdinand. The style of this example and the language of the legends point to its being of French manufacture for sale in Portugal. *Mereld*²⁸ in the obverse legend is evidently for *merel* or *merele* (L.L. *merellus*), a *méreau*, either for casting or for ecclesiastical use.²⁹ *Conjuré* appears to mean "exorcised", blessed (by the priest): if a reckoning-*méreau*, as a preventive against dishonest summing; if a token-*méreau* for church purposes, naturally so

The names of the three kings were used as the obverse legend on the gold florin, and on other money, of the Imperial City of Cologne in the last quarter of the fifteenth century: see Engel and Serrure, *Traité de Numismatique*, Paris, 1891-99, iii, pp. 1214-15.

²⁶ *Collection du Dr. Jules Meili*; sold by Schulman, Amst., 1910.

²⁷ *Collection de Joachim José Judice dos Santos*, sold by Schulman, Amst., 1906.

²⁸ A form not in Godefroy.

²⁹ Barnard, pp. 81-2, and see Aragão on *méreaux* in Portugal, i, p. 245, note.

treated. The reverse legend reads simply "Of latten, for good (*i. e.* honest) use", which seems to show that this is a casting-counter. We may compare certain legends found on early French jettons, such as *Je sui de laitton méreau à conte; Pour bien jeter*,³⁰ &c. The indication of the metal was necessary to prevent rogues from gilding or plating such pieces and passing them as money. The Portuguese copper coinage began later than this, in the reign of Edward, and from his time the jettons of Portugal apparently ceased to copy coin-types too closely, perhaps being forbidden to do so, as in other countries.³¹

5 *Obv.*—Similar to No. 4, but the inner circle is granulated. *Legend.* ⊗ IHS — ⊗ — DEI — ⊗ — GRÆ — ⊗ — REX. *Rev.*—Similar to No. 4, but the inner circle is granulated. *Legend.* As on the obverse, but with P for *Portugalia* added at the end. Size 6. Meili, No. 5, which is this specimen.³² Jetton of the reign of John I (1383-1433), who married Philippa, daughter of John of Gaunt.

6. (Pl. V.) *Obv.*—Similar to No. 5, but the escutcheons only slightly cut the inner circle, and do not intrude into the legend space, and the cross is cantoned by four stars of six points. *Legend.* AO ⊗ GALARDON ⊗ COSMO ⊗ AO ⊗ DO. *Rev.*—As No. 5, but the cross is cantoned by four sixfoils. *Legend.*

³⁰ Rouyer and Hucher, *Histoire du Jeton*, 1858, p. 26; for others see Barnard, pp. 46-8.

³¹ Barnard, pp. 34-5; and, as to the Nuremberg counters, Gebert, *Geschichte der Nürnberger Rechenpfennigschlager*, Nuremberg, 1918, p. 11.

³² Cp. Teixeira de Aragão, *Histoire du Travail*, No. 1521. (I have been unable to find this book, and have accepted Meili's references to it.)

† EN:LA:TON: A BON SERVIÇO. Size 5. Meili, No. 6, which is this specimen.³³ Jetton of the reign of John I. *Galardon* means "guerdon" or "reward".³⁴ The reverse legend would read in modern Portuguese *Em latão a bom serviço*. Cp. No. 4.

7. *Obv.*—Similar to No. 6. *Rev.*—The cross is somewhat more slender, and the sixfoils are smaller. Size 5. Schulman, Cat. 76, No. 2216, which is this specimen. Jetton of the reign of John I.

8. *Obv.*³⁵—A slender Cross of the Order of Christ with two pellets and a sixfoil arranged saltirewise in each canton; the end of each arm of the cross is flanked by two pellets enclosed in annulets; all within a granulated inner circle. *Legend.* AVΘ ✠ MARIΘ ✠ GRACIA ✠ PLΘRΘ ✠. *Rev.*—Similar to the obverse of No. 6, but, in addition to the stars, four annulets each enclosing a pellet surround the central shield, and in the legend-space above each of the four other shields are three more annulets enclosing pellets. *Legend* (continued from the obverse). DOMI—RVS—TΘIV—R [for m] BΘ [*nedicta*].³⁶ Size 5. Schulman,

³³ Cp. Aragão, *Hist. Trav.*, No. 1522, and Amaral, *Diccionario de Numismatica Portuguesa*, Oporto, 1881, p. 170.

³⁴ Dr. Thomas, of the British Museum, suggests that *do* might stand for *dom*. There is no mark of contraction visible above the *o*, but this sign is often omitted on counters. In that case the legend would mean "For guerdon as for gift", and may be compared with *Par amours sui donne* often found on French jettons: *e.g.* Barnard, p. 51.

³⁵ The beginning of the continuous legend decides which is the obverse of this piece.

³⁶ The practice of breaking off and leaving a word, or even a letter, unfinished at the end of a legend for lack of space is very common on thirteenth and fourteenth century jettons of all countries, and finds its parallel on seals of the same period. See

Cat. 76, No. 2217, which is this specimen; *cp.* Meili, No. 8. Jetton of the reign of John I.

9. *Obv.*—The five escutcheons of Portugal arranged in cross, cantoned by four sixfoils; all within a granulated inner circle. *Legend.* +POR+TV+GAL+ET+AL+GARBI. *Rev.*—A Cross of the Order of Christ, cantoned by four mullets of six points; all within a granulated inner circle. *Legend.* As on the obverse. Size 5. Meili, No. 9, which is this specimen. Jetton of the reign of John I. Algarve, the southernmost province of Portugal, had been conquered by Sancho I (1185–1211), who assumed the additional title of *Rex Algarbiorum*,³⁷ but it was not finally wrested from the Moors till 1270, in the reign of Alfonso III.³⁸

10. *Obv.*—The five escutcheons in cross, as before, cantoned by four annulets, each enclosing a pellet; all within a granulated inner circle. *Legend.* †HVH: REGINA:QELORVR[for m] H[re]. *Rev.*—A slender Cross of the Order of Christ, cantoned as on the obverse; four pairs of annulets flank the cross-heads; all within a granulated inner circle. *Legend.* †HVH: MARIA:GRA:PLENA:D[ominus]. Size 5. Santos, No. 2206, which is this specimen. Jetton of John I. The obverse legend is from the Office of Compline.


11. Variant of No. 10. Schulman, Cat. 76, No. 2220, which is this specimen.

Barnard, p. 44; and *Œuvres de Longpérier*, ed. by Schlumberger, 1888–4, v, pp. 136–7; “l’abréviation par suspension”: Demay, *La Paléographie des Sceaux*, 1881, p. 13.

³⁷ B and V were interchangeable in old Portuguese: *Elucidario*, i, p. 164; ii, p. 392.

³⁸ So far as is at present known, the name of this province first appears in the Portuguese currency on a unique *Double Denier* of Alfonso II (1211–23), described and illustrated in *Collection du Dr. Meili*, Pt. I, p. 2, No. 9. This coin was not known to Araújo.

12. *Obv.*—The five escutcheons in cross, as before, but without any small ornaments in the field. There are two inner circles, the innermost plain and cut by the escutcheons, the outermost granulated. *Legend.* † *QR*LATON*D[e]*BO*NON* [the last two letters apparently a blundered repetition] **GÄLÄ*[*rdon*]*. *Rev.*—A slender Cross of the Order of Christ; in each canton are three sixfoils arranged in triangle and surrounding an annulet enclosing a pellet; all within a granulated inner circle. *Legend.* † *AVE*MARIA*GRACIA*PLANA*D[ominus]*. Size 6. Schulman, Cat. 76, No. 2221, which is this specimen. Jetton of the reign of John I. The obverse legend seems to mean "Of latten of good warranty (*i. e.* value)".

13. (Pl. V.) *Obv.*—The five escutcheons in cross, cantoned by four mullets of six points; within a granulated inner circle. *Legend.*  *RAX PORTVGÄLI[e]*. *Rev.*—A single heater-shield, with concave top, charged with the five plates, superimposed upon a Cross of the Portuguese Order of Aviz;³⁹ at each horn⁴⁰ of the shield is an annulet, and its base divides P—O; all within a double tressure of four arcs with a small annulet in each spandrel, which in turn is surrounded by a granulated inner circle. *Legend.* [*Adiutori*]

³⁹ That is a cross coupé fleury. Here all but the four lys-heads is concealed by the shield. In the arms of the King of Portugal as shown in *L'Armorial du Héraut Geldre* (No. 348) the large shield is set over a cross of Aviz, the heads of which encroach on the bordure of Castile: on this arrangement see Spener, i, p. 282, § VII. The Military Order of Aviz, a castle of that name on the frontier of Portugal, was instituted by Alfonso I in 1147: see Favine, *Theater of Honour*, 1623, Bk. 6, p. 186; Ashmole, *Order of the Garter*, 1672, p. 69; and No. 35.

⁴⁰ I use Upton's convenient term: *De Militari Studio*, 1654, p. 234.

V[m]*ROSTRVM* [*in nomine Domini, or qui fecit caelum et terram*]. Size 6. Schulman, Cat. 76, No. 2222, which is this specimen; *cp. Collection Meili*, Pt. II, No. 2256, which is of latten. Jetton of the reign of John I. The reverse type, except for the tressure, resembles that of the *Meio Real Cruzado* of that king.⁴¹ This piece, as the mint-mark PO on the obverse indicates, was struck at Porto [*O Porto*].⁴² My conjectural restoration of the reverse legend is suggested by coins of the same reign: it is from Psalm cxxiii. 8. The form of the shield on the reverse is unusual.⁴³

14. (Pl. V.) *Obv.*—Enclosed in a double tressure of four arcs and four angles, with a small annulet in each spandrel, a shield charged with a tower⁴⁴ flanked by two annulets, the usual cross being completed by

⁴¹ See Aragão, Pl. VIII, Nos. 20–22.

⁴² P and PO are the mint-marks of Oporto on Portuguese coins.

⁴³ As pointed out by Woodward ("Heraldry of Spain and Portugal", in *The Genealogist*, N.S., v, pp. 50–1), early Spanish and Portuguese shields are usually rectangular in chief and broad in the base, which is either rounded or slightly pointed, and not of the heater form so familiar in England. Hence, instead of the three charges, set 2 and 1, commonly found with us, and naturally suggested by the latter shape, in the Peninsular we generally find five charges, arranged in cross or in saltire. The evidence of seals, carvings, and (save for some exceptions on certain monies of Ferdinand) coins, bears this out: *e.g.* the leaden seal (1219) of Alfonso II figured in the *Elucidario* cited above (i. 332); the seal (1262) of John I, King of Aragon, reproduced by Lecoy de la Marche in *Les Secaux*, p. 179; while of the seven thirteenth and fourteenth century Spanish seals illustrated in Pl. XXII of Schlumberger and Blanchet's *Collection Sigillographique*, 1914, only one is heater-shaped, the rest being as described.

⁴⁴ To represent either the Castilian alliance, or possibly the crest of the King of Portugal (see *Armorial du Héraut Geldre*, No. 348). The irregularity of placing a crest on a shield need not trouble us here, but the crest of John II on his Garter Plate was a wyvern gules. *Cp.* No. 43.

four small escutcheons of Portugal, one above, one below, and one on each side of the shield; all within a plain inner circle. *Legend.* ✠OTNTTTTΘ:DOMINO: CTNTIQ[u]M:NOV2[m]:. *Rev.*—Enclosed in a double tressure of eight angles, with a pellet in each spandrel, a triple-towered castle with water slightly indicated in front; above the central tower is a small escutcheon of Portugal, and below the water is another. *Legend.* +ΘM:LTTΘI:TT BΘM: SΘRVICO: ΘI:TLG[arismo]. Size 7. Meili, No. 10, which is this specimen. Jetton of the reigns of Alfonso V (1438–81) and John II (1481–95). As to the reverse, the castle with its front washed by the sea appears to represent Ceuta, which had been captured from the Moors by John I in 1415. This type occurs on coins of Alfonso V and John II.⁴⁵ The obverse legend is from Psalm xcv. 1, &c.; the reverse legend means "Made of latten for good use in algorism (*i. e.* arithmetic)". The form of the 2 in *novum* is that of the fourteenth or fifteenth century Spanish example in stone given by Day, No. 82,⁴⁶ but turned the other way about, as in No. 20. Both positions will be found here later, and may be seen in sigillography.⁴⁷

15. *Obv.*—The five escutcheons in cross, enclosed by a plain circle and superimposed upon a Cross of the Order of Aviz; between each cross-head of the latter is a castle, the first appearance here of the bordure of Castile; all within a granulated inner circle. *Legend.* +GONSERVAGIO:RAX:PVBΛIGΘ:IN. *Rev.*—

⁴⁵ See their *Ceittils* in Aragão, i, Plates XI, 20–24; XII, 25–30; XIII, 15–17.

⁴⁶ *Alphabets Old and New*, 1910.

⁴⁷ See *e. g.* Demay, *Paléographie des Sceaux*, pp. 71–2.

The wheel of a water-mill surrounded by splashes of water which extend to the edge of the flan; no inner circle. Mute. Size 7. Meili, No. 11, which is this specimen.⁴⁸ Classed by him as a jetton of the reigns of Alfonso V and John II, but of this presently. The obverse type somewhat resembles the reverse of the *Dobra Gentil* of Ferdinand, which may have suggested it.⁴⁹ The water-mill wheel was a device of Alfonso V,⁵⁰ and represented *Rerum Vicissitudo*.⁵¹ According to Giovio and Symeoni⁵² it was a Guzman device. A variant in *Collection Meili*, No. 2539, reads on the reverse $\text{h}\epsilon$ RODIPIO, and has no splashes. Portuguese families of importance, as was the custom in other countries, sometimes placed their own arms or badges on their casting-counters.⁵³ There can be little doubt that the obverse legend should have been *Conservacio* (*i. e. conservatio*) *reipublicae*,⁵⁴ the *rex* blunder being copied from the meaningless *Reparacio rex publice* found on coins of John I.⁵⁵ The latter legend, emended in a similar way, would be very appropriate to that king, while the former legend would suit John II, not his luckless father Alfonso V. If, therefore, this be the true interpretation, it would seem that jettons reading *conservatio reipublicae* are to be

⁴⁸ Cp. Aragão, *Hist. Trav.*, No. 1524, and Amaral, p. 170.

⁴⁹ Aragão, i, Pl. IV, Nos. 2, 3.

⁵⁰ Aragão, i, 225.

⁵¹ See De Boot, *Symbola Principum Sc. Italiae*, Arnheim, 1681, pp. 279-80.

⁵² *Sententiose Imprese*, Lyons, 1561, p. 103.

⁵³ J. L. de V. in *O Archeologo Português*, 1900, p. 53.

⁵⁴ C and G being interchangeable in early Portuguese: see Note 25.

⁵⁵ Aragão, i, p. 202, Nos. 20-21.

attributed to the reign of John II only. The presence of his father's device need not, I think, disturb this conclusion. The error noted above probably arose from S and X being often confused in old Portuguese,⁵⁶ which brings us to *respublicae*, the Latinity of the graver falling short of putting *res* in the genitive.⁵⁷ This is one of those Portuguese jettons which used to be mistaken by numismatists for copper Reals of Alfonso V and John II,⁵⁸ and the legend may have assisted to this error.

16. (Pl. V.) *Obv.*—An annulated cross, with a pellet in each annulet, surrounded by a double tressure of four arcs and four angles with a pellet in every spandrel; the tressure is superimposed upon a Cross of Aviz, the heads of which cut a plain inner circle and intrude into the legend-space. *Legend.* IHS—PXR—MEL—QHIO[r]. *Rev.*—Similar to that of No. 15, but there is a plain inner circle over which the splashes pass to the edge of the flan. Mute. Size 7. Meili, No. 12, which is this specimen. Jetton of the reigns of Alfonso V and John II. For the obverse legend see No. 2.

17. (Pl. V.) *Obv.*—The five escutcheons in cross, the central one surrounded by four annulets and four pellets set alternately, and the whole placed upon a cross pattée concave cantoned by four annulets each

⁵⁶ *Elucidario*, ii, p. 411.

⁵⁷ Faulty Latin is by no means uncommon upon early Portuguese money.

⁵⁸ See Manoel Severin de Faria, *Noticias de Portugal*, Lisbon, 1740, Discurso iv, §§ xxix, xxx, where *contos* are confused with coins; and consult Blanchet, *Nouveau Manuel de Numismatique*, 1890, ii, p. 453; Aragão, i, p. 245, note, and his *Hist. Trav.*, p. 119; also Amaral, pp. 15, 42, 44, 170-1.

enclosed in a semi-circle; all within a plain inner circle and superimposed upon a Cross of Aviz, the heads of which intrude into the legend-space. *Legend.* COII[=n]T—COIIT—COII[t]—COIIT. *Rev.*—Enclosed within a double tressure of four arcs and four angles a small round-based shield charged with a plain cross throughout and surrounded by four S's and four annulets set alternately; all within a plain inner circle. *Legend.* ✠COIITVS: COIITVS: COIITVS.⁵⁹ Size 7. Meili, No. 13, which is this specimen. Jetton of the reigns of Alfonso V and John II. That the main feature of the obverse type is a cross pattée concave, as described, may be seen from early Portuguese seals, such as those found repeatedly figured in the *Elucidario*.⁶⁰ The legends simply inform the public that such pieces are counters, not coins. This was now necessary, because a copper currency had been established in Portugal by Alfonso V's immediate predecessor Edward (1433-8). The S on the reverse suggests a mint-mark.⁶¹ There was a mint at Çamora or Samora (Zamora). Its usual mark on coins was Ç—A, but the spelling Samora occurs on Portuguese money.⁶² Or may this letter be the initial of the issuer?⁶³

18. *Obv.*—Similar to No. 17, but four S's are arranged round the central shield, and in each canton of the

⁵⁹ For *contos* (plural). O and U were interchangeable in old Portuguese: *Elucidario*, ii, p. 176.

⁶⁰ i, pp. 328, 330-1, 333-5.

⁶¹ Cp. Nos. 18-21, 65.

⁶² E.g. Aragão, i, p. 180, No. 10. Ç, S, and Z were interchangeable in old Portuguese: *Elucidario*, i, p. 218; ii, pp. 295, 414.

⁶³ Much as that of the *ensaiador* (assayer) often appeared on Portuguese money.

cross is S instead of an annulet. *Legend.* CONT—VS[co]—[nt]VS—WOTR. *Rev.*—Similar to No. 17. *Legend.* +CONTVS: CONTVS: CONTVS. Size 7. Schulman, Cat. 76, No. 2231, which is this specimen. Jetton of the reigns of Alfonso V and John II. If OTR in the obverse legend stands for *otear*, see No. 34, in that event W looks like a blunder. For the S on the obverse see No. 17.

19. *Obv.*—Similar to No. 15, but the cross of escutcheons is cantoned by four annulets, each enclosing a pellet; there are eight castles in the bordure, and the circle outside it is plain. *Legend.* +IĤSPĀR+MĀLCĤIOR+VĀL[thasar].⁶⁴ *Rev.*—Similar to Nos. 17 and 18, but the shield is somewhat larger and has a pointed base; the cross on it extends to the chief only. *Legend.* QORTĤ SĀRĤĤGIO: RĤ[a]: DĤBICĤĤ. Size 7. Schulman, Cat. 76, No. 2232, which is this specimen. Jetton of the reigns of Alfonso V and John II. For the obverse legend see No. 2. The reverse legend appears to mean "Reckon diligently; go over again⁶⁵ critically".⁶⁶

20. (Pl. V.) *Obv.*—A well surmounted by its timber-work, surrounded by four annulets and flanked by two stars of five points; all within a plain inner circle. *Legend* (beginning at the bottom on the left). +IĤSPĀR: MĀLCĤIOR:VĀLTHĤSĀR⁶⁷:ĤT. *Rev.*—A cross pattée concave with a star of five points in its

⁶⁴ See Note 37 above.

⁶⁵ And so "check".

⁶⁶ Lit. "with hesitation". This reminds us of such legends on French and Low Country jettons as *Se vos failles le recomptes; Si vous faillez regettes bien; Jetes encore un lot* ("coup"); and the like: see Barnard, p. 48.

⁶⁷ See Note 37.

centre, and an S in each of its four ends, cantoned by four similar stars each in a semicircle; all within a plain inner circle. *Legend.* GASP̄AR: MALCHIOR: SALTIQ[IO = h]AS̄AR. Size 8. Schulman, Cat. 76, No. 2233, which is this specimen; Santos, No. 2216^a. Jetton of the reigns of Alfonso V and John II. For the legend see No. 2. The *et* at the end of the obverse legend was probably added merely to fill up the space, or possibly to repair its omission before *Valthesar*. For the form of the S in the reverse legend see No. 14, and for the S on the cross see No. 17. This is another of those Portuguese jettons which were formerly mistaken for money: see Nos. 15, 21-6. Does the well refer to the Well of Everlasting Life, *i.e.* the wound in the side of Christ, which was so symbolized?

21. As No. 20, but from different dies, and the reverse legend reads SALIQAS̄AR. The I and the reversed Q united represent h. Size 8. Schulman, Cat. 76, No. 2234, which is this specimen. Jetton of the reigns of Alfonso V and John II.

22. *Obv.*—A large broad-based shield, ensigned with a small crown, bearing the arms of Portugal (the five escutcheons not in cross, but in saltire⁶⁸) within the bordure of Castile, which has fourteen castles; the shield is flanked by two pellets; all within a plain inner circle, just cut by the horns of the shield. The shield is superimposed upon a Cross of Aviz, the lys-heads of

⁶⁸ Spener (i. 281, § iii) points out that the escutcheons in the arms of Portugal should not be arranged in quincunx (*decussatim*), *i.e.* saltire, as some thought, but in cross. The former is found in the coat of the Dukes of Braganza, a bastard branch of the royal house, deriving from John I: see, *e.g.* *ibid.*, i. 288, § xiv, and Tab. XII; also Petra Sancta, *Tesseræ Gentilitiæ*, 1638, p. 268.

which intrude into the legend-space. *Legend.* DIZEI⁶³ — ROS:D — ECONT — VS:P[ara]:[ontar]:. *Rev.*—A pelican in her piety within a plain inner circle. *Legend.* +CONTVS:CONTVS:CONTVS:CONTV[s]. Size 7½. Schulman, Cat. 76, No. 2235, which is this specimen; cp. Meili, Nos. 15, 17.⁷⁰ Jetton of the reign of Emanuel (1495–1521). This obverse, like that of many of the succeeding *contos*, copies what had become a common obverse coin-type from John II's time inclusive downwards. The obverse legend means "Pennies of account for reckoning", which is the equivalent of *Rechenpfennige* so commonly found on Nuremberg casting-counters. The *dinheiro* was the most familiar coin in Portugal down to the period dealt with here. Its name consequently seems to have become, as was the case with its kindred pieces in other countries, a generic term for money, which it still means in modern Portuguese. As to the reverse type, a pelican vulning herself to feed her young had been the well-known impress of Alfonso X, "El Sabio", King of Castile and Leon (1252–84), who had used with it the motto *Pro lege et grege*: the whole *devise*,

⁶³ This D with the unclosed top appears on many of the following *contos*. It may be seen on the fourteenth-century Spanish seal of Gomez Diaz de la Penna, reproduced in Schlumberger and Blanchet, *op. cit.*, p. 157 and Pl. XXII.

⁷⁰ Also Arago, *Hist. Trav.*, No. 1526; and Amaral, p. 171. The rectangular C (C) which we find here and later, till the time of Sebastian, whether a survival or a revival, is a curiosity. It is not used on Portuguese money, nor, I believe, on that of any other country, during this period. It is, however, met with here and there on other contemporary objects: as on a picture-frame of 1480 at the Louvre (Day, *op. cit.*, No. 86); on the brass of 1500 to Albert, Duke of Saxony (Greeny, *Brasses of the Continent*, 1884, No. 50), and on that of 1502 to Amelie, Duchess of Bavaria (*ibid.*, No. 53), both at Meissen.

"âme et corps", being symbolical of the good king who devotes himself to his people's welfare.⁷¹ It was used as his impress by John II,⁷² and Schulman, Cat. 76, No. 135,⁷³ describes a bronze pattern for the gold *Portuguez*, with a reverse of this type and the legend *Pro lege et grege*, struck temp. John II,⁷⁴ "O Principe perfeito". This is another of those Portuguese *contos* which used to be mistaken by numismatists for money: see Nos. 15, 16, 20-26.⁷⁵

23. *Obv.*—Similar to No. 22, but the shield is flanked by two small crosses instead of pellets. *Legend.* DINEI—ROS:D—ELON—TVS:D[*ineiros* ?]. *Rev.*—Similar to No. 22. *Legend.* +CONTVS:CONTVS:CONTVS:CON[t]VS:. Size 8½. Schulman, Cat. 76, No. 2236, which is this specimen; variant of Meili, No. 16. Jetton of the reign of Emanuel.

⁷¹ The title of a laudatory pamphlet on Charles I, published in 1649, describes him as "The Princely Pelican", thus unintentionally expressing a somewhat ambiguous belief that he shed his blood for the good of his subjects (Lowndes, *Bibliographers' Manual*, p. 416). In Christian Art the pelican became a familiar symbol of the Redemption; and Dante terms Jesus "Nostro Pelicano" (*Paradiso*, xxv. 13). The pelican in her piety was a favourite design on seals of ecclesiastics in the Middle Ages and later: see e.g. Schlumberger and Blanchet, *op. cit.*, Nos. 36. 67, 656; and Demay, *Le costume au moyen âge d'après les sceaux*, 1880, pp. 353-6; also the seal of the Prebendary of Biggleswade in Birch's *Seals*, Pl. XVI, No. 3; and that of an ecclesiastic, of late thirteenth-century date, illustrated in *The Archaeological Journal*, xxxvi, p. 104.

⁷² Aragão, i, p. 240, citing Faria y Sousa.

⁷³ From *Collection Meili*, Pt. II, No. 2546.

⁷⁴ Not known to Aragão.


⁷⁵ It was formerly erroneously supposed that John II ordered *six-centil* pieces of copper to be struck with the type of a pelican: see Fernandes, *Memoria das moedas correntes em Portugal*, Lisbon, 1856, p. 112.

24. *Obv.*—Similar to No. 22, and with the two pellets. *Legend.* :DIMEI:—ROS:D—E[CO]NT:—:VS:P[ara]:
[CO]ntar]:. *Rev.*—Similar to No. 23. Size 8. Schulman,
Cat. 76, No. 2237, which is this specimen; variant of
Meili, No. 17. Jetton of the reign of Emanuel.

25. *Obv.*—Similar to No. 22, and with the two pellets.
Legend. [CO]NT—[CO]NT—[CO]NT—CO]NT. *Rev.*—Similar
to Nos. 22-24. *Legend.* [CO]NTVS:[CO]NTVS:[CO]NTVS:
[CO]NTVS. Size 8. Schulman, Cat. 76, No. 2238, which
is this specimen. Jetton of the reign of Emanuel.

25 a.—Variant of No. 25, reading on the obverse
[CO]NTV—[CO]NTV—[CO]NTV. (Bought in Oxford, May
18, 1923.)

26. (Pl. V.) *Obv.*—Similar in general to Nos. 22-25,
but the castles in the bordure are reduced to nine, and
are much larger; the shield, which is not on a Cross of
Aviz, is elongated and round-based, and flanked by
arabesque ornamentation; the crown above it is better
defined; all within a granulated inner circle. *Legend.*
:TIMOR DOMINI SANCTVS PERMANET IN [=in]
DEO. *Rev.*—Similar to Nos. 22-25, but the inner
circle is granulated. *Legend.* ET QUI MANET IN
CARITATE IN DEO MANET ET. Size 8. Gilt.
Schulman, Cat. 76, No. 2239, which is this specimen;
Meili, No. 18.⁷⁶ Jetton of the reign of Emanuel. The
obverse legend is founded on Psalm xviii. 10; the
reverse legend is from *Epist. Joannis* i. iv. 16.

27. (Pl. V.) *Obv.*— within a plain inner
circle. *Legend.* *DPLV*DOA*NOM*NMG. *Rev.*
—An armillary sphere with one circle of latitude,

⁷⁶ Cp. Aragão, *Hist. Trav.*, No. 1527; and De la Tour, *Collection Rouyer*, Paris, 1899, No. 783.

no zodiac, and a terrestrial globe in the centre; all within a plain inner circle. *Legend.* * OMNIS:SPES: EIVS:IN:OE [for *Deo*].⁷⁷ Size 8½. Meili, No. 19, which is this specimen.⁷⁸ Jetton of the reign of Manoel. As to the obverse, it probably represents the initial of Emanuel,⁷⁹ "O Felicissimo", the king who ruled during the "heroic period" of Portugal,⁸⁰ perhaps attended by the initials, in smaller letters, of the surnames of four of the great explorers and colonizers of his reign: Duarte Pacheco Pereira,⁸¹ Vasco da Gama, Affonso de Albuquerque, and Amerigo Vespucci. With regard to the letters of the obverse legend, may these be initials of minor discoverers, or of places discovered or colonized? The former supposition seems to fail at once for lack of a C for Cadomosto, who could hardly have been omitted from such a list. The letters, however, might stand for discoveries or annexations of Emanuel's reign, of which there are sufficient to fit the initials. The armillary sphere is said to have been taken as a device by Emanuel on the advice of John II, who expected him (his first cousin) to become his successor. It bore reference to the geographical discoveries of the Portuguese.⁸² In

⁷⁷ These "lettres retournées" are common on early jettons of all countries, as they are on old seals, and are due to inadvertence on the part of the gravers, who forgot to reverse the letters when cutting: see e.g. Chassant and Delbarre, *Dict. de Sigillographie Pratique*, 1860, p. 115.

⁷⁸ Cp. Amaral, pp. 42, 43.

⁷⁹ M appears as a prominent feature of the type on coins of Manoel; see e.g. Aragão, Pl. XIV.

⁸⁰ That is the days of the celebrated Portuguese navigators.

⁸¹ Who, in 1508, defended Cochin, and is said to have defeated 50,000 natives with only 900 Portuguese.

⁸² Favine, Bk. 6, p. 188. Spener (i, p. 283, § x) says that John II

the reverse legend, apparently suggested by Ps. cxlv. 5, *ejus* is, of course, the king.

28. *Obv.*—A shield, flanked by two pellets and ensigned with a large crown, bearing the arms of Portugal with the bordure of Castile; there are seven castles in the bordure; all within a plain inner circle. The five escutcheons are arranged in cross again, not in saltire. *Legend.* +CONTOS+AVSPERA+CONT[ar]. *Rev.*—An armillary sphere with four circles of latitude, the zodiac from right to left,⁸³ and no terrestrial globe in the centre, surrounded by eight stars; all within a plain inner circle. *Legend.* +CONTOS+VSPER+ACONTA[r]. Size 8. Schulman, Cat. 76, No. 2241, which is this specimen; variant of Meili, No. 20. Jetton of the reign of Emanuel. In the obverse legend AVS appears to be merely a blundered repetition of the last two letters of the preceding word,⁸⁴ and the same applies to the VS in the reverse legend.

29. *Obv.*—Similar in general to No. 28, but the shield is smaller and flanked by two annulets, the crown is clumsier and does not touch the shield, and the five escutcheons are replaced by five annulets in saltire, thus exhibiting fictitious arms; there are eight castles in the bordure; all within a plain inner circle. *Legend.* ♣CONT ♣VSPE: ♣RACO ♣VTAR.

himself adopted it for the same reason. Upon European money of Portugal it does not appear till the time of Antonio I (1580): see Araújo, Pl. XXXIII, 12; and then not again till much later on certain small coins; but it was frequently used as a counter-mark from John IV's day. It occurs, however, on Portuguese Colonial money from the time of Emanuel inclusive.

⁸³ Not the heraldic right and left.

⁸⁴ AV and O are found for one another in early Portuguese: see *Elucidario*, ii, p. 176.

Rev.—An armillary sphere with six circles of latitude, the zodiac from right to left, and no terrestrial globe in the centre, surrounded by ten large stars; all within a plain inner circle. *Legend.* ♣ CONT: ♣ VSPER ♣ ACON ♣ TARC[ontos]:. Size $8\frac{1}{2}$. Cf. Neumann, ii, No. 14, 929. Jetton of the reign of Emanuel. The legends are, of course, simply the familiar *contos*⁸⁵ *pera*⁸⁶ *contar*. It is likely that the four ornaments which interrupt the words of the legends in this and succeeding pieces are really the lys-heads of a Cross of Aviz, the rest of which is supposed to be below the inner circle.

30. *Obv.*—Similar to No. 29, but the crown is still further removed from the top of the shield. *Legend.* ♣ CONT ♣ VSPE ♣ RACO ♣ VTAR. *Rev.*—An armillary sphere with four circles of latitude, no zodiac, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* Similar to that on the obverse, but too worn to be read accurately throughout. Size $7\frac{1}{2}$. Schulman, Cat. 76, No. 2242, which is this specimen; probably Meili, No. 21. Jetton of the reign of Emanuel.

31. *Obv.*—Similar to No. 29, but the crown once more touches the shield; there are seven castles in the bordure, and two inner circles, of which the innermost is granulated and cut by the crown, the outermost plain. *Legend.* +CONTOS PER[a] CONTAR + CON: D[iligencia?]. *Rev.*—An armillary sphere with six circles of latitude, a zodiac from left to right, and apparently a very small terrestrial globe in the centre,

⁸⁵ See Note 59.

⁸⁶ A and E are found for one another in old Portuguese: *Elucidario*, i, pp. 23, 386. Thus *pera* = *para*.

surrounded by eight stars; all within a plain inner circle. *Legend.* +CONTOS + CON[t]OS + [pa] RÆ OESPUG. Size 8. Schulman, Cat. 76, No. 2243, which is this specimen. Jetton of the reign of Emanuel. In the reverse legend *o* seems to be the article. Does *espug* stand for *espulgar* = "to examine closely"? *Cp. Entendez bien au compte* on a Breton casting-counter of from 1483 to 1515.⁸⁷

32. *Obv.*—Similar to No. 31, but the shield is flanked by two pellets.⁸⁸ *Legend.* +CONTOS + PER[a] CONTAR + CON: D[iligencia?]. *Rev.*—An armillary sphere with four circles of latitude, the zodiac from right to left, and a very small terrestrial globe in its centre, surrounded by eight stars; all within a plain inner circle. *Legend.* +CONTOS + VSPER + ACONTAR[r]. Size 8. Meili, No. 22, which is this specimen. Jetton of the reign of Emanuel. For the reverse legend see No. 28.

33. *Obv.*—Similar to Nos. 31, 32. *Legend.* +CONTOS + PER[a] CONTAR + CON: D[iligencia?]. *Rev.*—An armillary sphere with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within two inner circles, of which the innermost is plain, and the outermost granulated. *Legend.* ▲CONTOS ▲PARA ▲VEERDADE. Size 8. Schulman, Cat. 76, No. 2245, which is this specimen; Meili, No. 23. Jetton of the reign of Emanuel. The reverse legend means "Counters for accuracy" (lit. "truth"); *cp. Pour le vrai savoir* on a fifteenth-century jetton of Savoy.⁸⁹

⁸⁷ Barnard, p. 48.

⁸⁸ They may, however, be worn-down annulets.

⁸⁹ Barnard, p. 123, No. 82.

34. *Obv.*—A round-based shield ensigned with a crown and charged with the arms of Portugal; there are ten castles in the bordure; all within a plain inner circle which the crown just cuts. *Legend.* ♣COUTO ♣DOPTO ♣OTETR ♣ECO[n]TAPR. *Rev.*—An armillary sphere with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* ♣DEVIST ♣D:P:P: ♣PARA ♣METES. Size 8½. Meili, No. 24, which is this specimen.⁹⁰ Jetton of the reign of Emanuel. The obverse legend means "Counter of the Port⁹¹ to inspect and reckon accounts with"; the reverse legend, "Device of the King of Portugal. Keep your eyes open".⁹² The latter phrase in full was "para mentes".⁹³

35. (Pl. V.) *Obv.*—Similar in general to No. 34, but the shield is pointed, the crown slightly smaller, and there are twelve castles in the bordure. *Legend.* ♣COC[for n]TVS ♣DE:P:P:ET ♣:A:DVVS ♣GVINEE. *Rev.*—A small armillary sphere, with two circles of latitude(?) and neither zodiac nor terrestrial globe, surrounded by an arabesque ornamentation; all within a plain inner circle. *Legend.* ♣DEVISA ♣D:P:P:DS ♣[GN]ETRA ♣CADA VI3. Size 8. Meili, No. 25, which is this specimen. Jetton of the reign of Emanuel. The obverse legend, translated, is: "Counters of the King of Portugal and the Algarves, Lord of Guinea".

⁹⁰ Cp. Aragão, *Hist. Trav.*, No. 1531.

⁹¹ *Do Porto* = "Of the Port" [Oporto].

⁹² *Vigilate*.

⁹³ *Elucidario*, ii, p. 201. The *n*, and the stroke of contraction above the preceding vowel that took its place, being both suppressed, as was very usual.

The title "Lord of Guinea" had been assumed by John II in 1485, and appears on his money.⁹⁴ The reverse legend will read as *Devisa Domini Regis Portugaliae* ("Dominus" blundered for) *Domini Guineae et [terrarum] transmarinarum, Caballarii de Avizio*.⁹⁵

36. *Obv.*—Similar to No. 34. *Legend.* ♣ CONTV ♣ DOPTO ♣ D [blundered for O] TEAR ♣ ECO[n] TAR. *Rev.*—An armillary sphere, at the top of which is a lys in the legend-space, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* DEVISA:DE:R—DE:PVRTV GAL. Size 8. Gilt. Meili, No. 27, which is this specimen. Jetton of the reign of Emanuel. For the obverse legend see No. 34.

37. *Obv.*—Similar to No. 36. *Legend.* ♣ CONTV⁹⁶ ♣ DOPTO ♣ OTEAR ♣ ECO[n] TAR. *Rev.*—An armillary sphere, the top of which ends in a floral ornament, with five circles of latitude, the zodiac from right to left, and a small terrestrial globe in the centre; all within a granulated inner circle. *Legend.* DEVISA:DE:R:—DE:PVRTV GAL. Size 9. Schulman, Cat. 76, No. 2249, which is this specimen; *cp.* Meili, No. 26.⁹⁷ Jetton of the reign of Emanuel. For the obverse legend see No. 34.

38. *Obv.*—Similar to No. 37, but there are nine castles in the bordure, and the shield is flanked by two annulets. *Legend.* ♣ CONTV ♣ DOPTO ♣ OTETAR ♣ CO[n] TAR. *Rev.*—An armillary sphere,

⁹⁴ See Aragão, i, pp. 240 *et seq.*

⁹⁵ See No. 18.

⁹⁶ See Note 59.

⁹⁷ Also Aragão, *Hist. Trav.*, No. 1531; Amaral, pp. 15, 16.

at the top of which is a lys in the legend-space, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* DEVISA: DE:R—DE:PVRTVGLI. Size 8. Schulman, Cat. 76, No. 2250, which is this specimen. Jetton of the reign of Emanuel. For the obverse legend see No. 34.

39. *Obv.*—Similar to No. 35, but there are fourteen castles in the bordure, and the crown just cuts the inner circle. *Legend.* ♠ COYT ♠ VSPER ♠ ΔCOY ♠ TAR:C[ontus]. *Rev.*—A small armillary sphere, with one circle of latitude, no zodiac, and a terrestrial globe in the centre, surrounded by six stars; all within a plain inner circle. *Legend.* ♠ COYT ♠ VSPER ♠ ΔCOY ♠ TVSP. Size 8½. Meili, No. 28, which is this specimen.⁹⁸ Jetton of the reign of John III (1521–57). For the legends see No. 28. The end of that on the reverse is blundered.

40. As No. 39, but from different dies. Size 8½. Jetton of the reign of John III.

41. *Obv.*—A round-based shield, ensigned with a crown which is little more than a mere conventional outline, and flanked on the dexter side with P below an annulet, on the sinister side with two annulets one above the other; there are eleven castles in the bordure; all within a plain inner circle. *Legend.* M[=D]:N. IOANES: III: PORTVGA:· *Rev.*—An armillary sphere on a stand, with one circle of latitude, no zodiac, and a small terrestrial globe in the centre; all within a plain inner circle. *Legend.* ✠OMNIS: SPES:EIVS:IN:DEO. Size 8½. Meili, No. 29, which

⁹⁸ A similar one in Arago, *Hist. Trav.*, No. 1548.

is this specimen.⁹⁹ Jetton of the reign of John III. The P on the obverse is a mint-mark of Porto (Oporto), and the DN in the legend is, of course, for *Dominus*. For the reverse legend see No. 27.

42. *Obv.*—A shield of fanciful shape¹⁰⁰ charged with the arms of Portugal, but the cross formed by the five escutcheons is cantoned by four small castles, thus presenting fictitious arms (?); there are ten castles in the bordure, and the space between the shield and a plain inner circle is filled with ten annulets. *Legend.* ⊕ D·N·IOANES: I·I·I·PORTA[*v*inverted]. *Rev.*—An armillary sphere on a stand, with one circle of latitude, no zodiac, and with a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* ⊕ OMNIS ❖ SPES ❖ EIVS ❖ IN ❖ C. Size 8½. Schulman, Cat. 76, No. 2254, which is this specimen. Jetton of the reign of John III.

43. *Obv.*—Within a double tressure of four arcs and four angles a bombé shield charged with a tower¹⁰¹ flanked by two annulets and surrounded by four escutcheons of Portugal; all within a plain inner circle. *Legend.* ⊕ D·N· IOANNES· I·I·I· PCO:. *Rev.*—An armillary sphere on a stand, with one circle of latitude, no zodiac, and with a small terrestrial globe in the centre; all within a plain inner circle. *Legend.* ❖ O[*m*]NISS: SPES :: EIVS: IN: C[*e*][*o*]. Size 8½.

⁹⁹ A similar one in Amaral, p. 43.

¹⁰⁰ One of the many impossible forms of shield which came in after the perfecting of plate armour had ousted the actual service shield: see Barnard, *Companion to English History*, Oxford, 1902, pp. 150–52. This has a double-engrailed top, bombé sides, and an ogee base.

¹⁰¹ Cp. No. 14 obverse.

Meili, No. 30, which is this specimen.¹⁰² Jetton of the reign of John III.

44. *Obv.*—As No. 43, but the legend reads PO.
Rev.—As No. 43, but the legend reads OMNIS.
Size 8½. Schulman, Cat. 76, No. 2256, which is this specimen; Meili, No. 31. Jetton of the reign of John III.

45. *Obv.*—A round-based shield charged with the arms of Portugal, in which the cross formed by the five escutcheons is cantoned by four small castles (as in No. 42); there are seven castles in the bordure, and the shield is flanked by three annulets on each side; all within a granulated inner circle. *Legend.* ⊕·D:N: IOANES: I·I·I· P:O:.. *Rev.*—An armillary sphere on a stand, with one circle of latitude, no zodiac, and a small terrestrial globe in the centre; all within a plain inner circle. *Legend.* ⊕ OMNIS:SPES:EIVS: IN:CE[o]:. Size 8½. Schulman, Cat. 76, No. 2257, which is this specimen; Meili, No. 32. Jetton of the reign of John III.

46. *Obv.*—A round-based shield ensigned with a large crown and charged with the arms of Portugal; there are seven castles in the bordure, and the shield is flanked by P—O; all within two inner circles, the innermost plain, the outermost granulated, and both cut by the crown. *Legend.* +IOANES·3[R·P·ET·]. A:D:G:C:NC:ET·I·. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre, surrounded by a circle of dots; all within a granulated inner circle. *Legend.* A small crowned head. full-faced,¹⁰³ CONTOS

¹⁰² *Cp.* Aragão, *Hist. Trav.*, No. 1536.

¹⁰³ *Cp.* that in the obverse type of Nos 72-4.

DR—E PARA: HO[*nestidade?*].¹⁰⁴ Size 8½. Meili, No. 33, which is this specimen. Jetton of the reign of John III. For the Oporto mint-marks see Note 42. The obverse legend, translated, reads: "John the third, King of Portugal and the Algarves, Lord of Guinea, of the Conquests, Navigation, Commerce, and India". The last four titles had been assumed by Emanuel.¹⁰⁵ For the reverse legend see No. 35.

47. *Obv.*—Similar to No. 46, and with the same Oporto mint-mark. *Legend.* +IOANES·3·R·P·ET·A·I: D·G·C·N·CEI. *Rev.*—Similar to No. 46. *Legend.* A face as in No. 46, CONTOS:DR—E P·ARA·HO. Size 8½. Schulman, Cat. 76, No. 2259, which is this specimen; Meili, No. 34. Jetton of the reign of John III. For the legends see No. 46. The AI of the obverse legend stands for A[*lgarb*]i, which is found as an abbreviation of *Algarbiorum*; ¹⁰⁶ unless I is here a blunder for L, AI being a very common abridgement of the word on the coins.

48. *Obv.*—Similar to Nos. 46, 47, and with the same mint-mark. *Legend.* IOANES:3·R·P·ET·A·D·G·C·N·C·ET·. *Rev.*—An armillary sphere surrounded by small

¹⁰⁴ Compare similar injunctions on French and Flemish jettons of the fourteenth and fifteenth centuries, such as: *Gettez loialement; Entendez loiaument au compte: Garde vous de barat (i. e. cheating), &c.* (See Barnard, pp. 47-8.)

¹⁰⁵ The Latin is given more or less in full, but somewhat variously, by different writers. The version in Fernandes (p. 113) cannot be right. Correctly put and spelt it should apparently be: *Rex Portugaliae et Algarbiorum citra [mare] et ultra [mare] in Africa, Dominus Guineae, Conquisitionum, Navigationis, Commercii, Aethiopiae, Arabiae, Persiae, et Indiae.* Algarve beyond the sea was the district of Tangier and Ceuta. See the *Portuguez* of Emanuel in Aragão, i, p. 248, No. 2.

¹⁰⁶ *E. g.* on the *Ceiti* of John I: Aragão, i, p. 242, No. 17.

ornaments, with five circles of latitude, the zodiac from right to left, and a small terrestrial globe in the centre; all within a granulated inner circle. *Legend.* DEVISA·D·R·P·E—PARA·METES·PA [apparently the first two letters of *para* to fill up]. Size 8½. Schulman, Cat. 76, No. 2260, which is this specimen. The obverse is Meili's No. 34, the reverse his No. 35. Jetton of the reign of John III. For the obverse legend see No. 46, for the reverse legend No. 34.

49. *Obv.*—Similar to Nos. 46–8, and with the same mint-mark, but there is only one inner circle, granulated. *Legend.* +IOHANNES:3R:P:ET:A:D [G omitted] VINEE*. *Rev.*—Similar to No. 48. *Legend.* DEVISA D·[R·P·] PARA·METES·P [apparently the first letter of *para* to fill up]. Size 8. Schulman, Cat. 76, No. 2261, which is this specimen; Meili, No. 35. Jetton of the reign of John III.

50. *Obv.*—Similar to Nos. 46–9, and with the same mint-mark. *Legend.* +IOHANNES:3R:P:ET:A:D:GVINEE. *Rev.*—Similar to Nos. 46–9. *Legend.* DEVISA:D:R:P:E—PARA·METES P. Size 8. Schulman, Cat. 76, No. 2263, which is this specimen; *cp.* Meili, No. 36.¹⁰⁷ Jetton of the reign of John III.¹⁰⁸

51. *Obv.*—A round-based shield ensigned with a crown that cuts a plain inner circle and extends to the edge of the flan and charged with fictitious arms: *Five stars in cross, cantoned by four annulets each enclosing a pellet*; on either side of the shield are two pellets enclosed in semi-circles. *Legend.* CONTOS:

¹⁰⁷ Also Aragão, *Hist. Trav.*, No. 1537.

¹⁰⁸ Possible variants of two of the last five pieces will be found catalogued in Neumann, ii, Nos. 14927–8, but his descriptions cannot always be relied upon.

PARA·R¹⁰⁹ CO[*ntar*]. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from left to right, and a small terrestrial globe in the centre; all within a granulated inner circle. *Legend.* AOC ■ NO ■ V—NIT ■ OVN.¹¹⁰ Size 8. Meili, No. 37, which is this specimen. Jetton of the reign of John III. See Note 126 at the end of this paper.

52. As No. 51. Patinated. Schulman, Cat. 76, No. 2264, which is this specimen. Jetton of the reign of John III.

53. *Obv.*—A round-based shield charged with fictitious arms: *Five stars in cross*; at the top and sides of the shield respectively are three pairs of semicircles each enclosing a pellet; all within a plain inner circle. *Legend.* CONTOS ▲ PARA ▲ CONTA[*r*] ▼. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from left to right, and a small terrestrial globe in the centre; all within a granulated inner circle. *Legend.* + AOC ■ NO ■ V—NIT ■ OVN. Size 8. Schulman, Cat. 76, No. 2265, which is this specimen; Meili, No. 38. Jetton of the reign of John III. For the reverse legend see No. 51.¹¹¹

54. (Pl. V.) *Obv.*—A round-based shield ensigned with a crown and charged with the same fictitious arms as No. 53; at the sides of the shield is an in-

¹⁰⁹ R intrusive? Unless it stand for, *e.g.* *Rectamente*, which is probably less likely.

¹¹⁰ These square "points" are found on money of John III: see *e.g.* Aragão, Pl. XV, No. 1.

¹¹¹ The "decorations" that attend the outlines of the shields on Nos. 53-6 suggest an incomplete, or a rudimentary, bracket, upon which the shield is hung. On the more developed bracket see Barnard, p. 126. This feature began to come into vogue in the first half of the sixteenth century, the period of John III.

complete tressure composed of four complete and two unfurnished arcs, flanked by two annulets; all within a plain inner circle. *Legend.* *CONTOS:PERA:CONTAR. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from right to left, and a small terrestrial globe in the centre; all within a granulated inner circle. *Legend.* ♣ CONTOS:PERA:VERDA[de]. Size 9. Meili, No. 39, which is this specimen; Neumann, ii, No. 14934 and Pl. XV, but the reverse legend is misread. Jetton of the reign of John III. For the reverse legend see No. 33.

55. *Obv.*—A round-based shield charged with fictitious arms: *Five quatrefoils in cross cantoned by four annulets*; at the top, base, and each side of the shield respectively is a semicircle enclosing an annulet; all within two inner circles, of which the innermost is plain, the outermost granulated. *Legend.* ⊗ IEPSSI ⊕ APSI ⊕ ILSGILSI. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from left to right, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* + ΔOC ⊗ NO ⊗ V—NIT ⊗ OVN. Size 8. Meili, No. 40, which is this specimen. Jetton of the reign of John III. See Note 126 at the end of this paper.

56. *Obv.*—Similar to No. 55. *Legend.* ⊗ IBPGSL ⊕ APSI ⊕ ELSGILSI. *Rev.*—Similar to No. 55. *Legend.* ⊕ ΔOC ⊗ NO ⊗ V—NIT ⊗ OVN. Size 8. Schulman, Cat. 76, No. 2268 (but wrongly read there), which is this specimen; *cp.* Neumann, ii, No. 14932, obverse. Jetton of the reign of John III. For the obverse legend see No. 55, for the reverse legend No. 51.

57. *Obv.*—A round-based shield bearing fictitious arms: *Five quatrefoils in cross within a bordure charged*

with eight fleurs-de-lys; all within two inner circles, of which the innermost is plain, the outermost granulated; the space between the shield and the innermost circle is filled with stars and annulets. *Legend.* ♣ CONTOS ♣ PERA ♣ VERDADEE:D. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within two inner circles as on the obverse. *Legend.* ▲CONTOS▲PARA▲VEERDADEE.¹¹² Size 8. Meili, No. 41, which is this specimen. Jetton of the reign of John III. For the legends see No. 33.

58. *Obv.*—A round-based shield, ensigned with a crown, flanked by two quatrefoils, and charged with the arms of Portugal; there are seven castles in the bordure and two small pellets above the crown; all within a plain inner circle. *Legend.* ⚡CONTOS. PERA·CONTAR. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; no inner circle. *Legend.* ⚡CONTOS⚡:PERA:⚡CONTAAR. Size 8½. Meili, No. 43, which is this specimen. Jetton of the reign of John III.

59. *Obv.*—Similar to No. 58, but on each side of the shield are five pellets arranged in cross. *Legend.* ⚡CONTOS:PERA:CONTAR. *Rev.*—As No. 58. Size 8½. Schulman, Cat. 76, No. 2271, which is this specimen. Jetton of the reign of John III.

60. (Pl. V.) *Obv.*—A shield, ensigned with a very small crown, flanked by two annulets, and bearing fictitious arms: *Five estoiles in saltire within a bordure*

¹¹² These triangular "points" are found on money of John III: see e. g. Aragão, Pl. XVI, No. 16.

charged with fifteen castles; all within a granulated inner circle. *Legend.* ♣THIO] ♣THIO] ♣THIO] ♣THIO]. *Rev.*—An armillary sphere, with four circles of latitude, no zodiac, and with a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* ♣COHITV ♣COHITV ♣CONTV ♣CONTV. Size 8. Meili, No. 45, which is this specimen. Jetton of the reign of John III. II = N, and the obverse legend is simply *cont* spelt backwards.

61. *Obv.*—Variant of No. 60. *Rev.*—Variant of No. 60. *Legend.* *IO]SVT*HIO]SV*THIO]S*VTTHIO]. Size 8. Schulman, Cat. 76, No. 2273, which is this specimen; Meili, No. 44; *cp.* Neumann, ii, No. 14931, reverse. Jetton of the reign of John III. This reverse legend is *contus* spelt backwards and repeated as far as the space permitted.

62. *Obv.*—A round-based shield, ensigned with a crown, and charged with fictitious arms: *Five fleur-de-llys in cross*; all within a plain inner double circle. *Legend.* ✠CONTOS:PERA:CONTAR ∴ *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within a very slightly defined plain inner circle. *Legend.* ✠CONTOS: ✠PERA:CONTAAR: Size 8½. Schulman, Cat. 76, No. 2274, which is this specimen; Meili, No. 46. Jetton of the reign of John III.

63. *Obv.*—A shield, ensigned with a very small crown, flanked by two pellets and charged with fictitious arms: *Five estoiles in saltire, cantoned by four of the five escutcheons of Portugal*; all within a plain inner circle. *Legend.* ♣.V:M:V.♣ :V:M:V:♣

.V:M:V. ♣.V:M:V. *Rev.*—An armillary sphere, with four circles of latitude, no zodiac, and with a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* *COYTA*COYT*COYT*COYT. Size 9. Schulman, Cat. 76, No. 2275, which is this specimen; Meili, No. 47. Jetton of the reign of John III. Can the obverse legend be read as *Verdadeiramente maneja*, repeated, = "manipulate (perform your 'manual' arithmetic) truthfully?"¹¹³ Or *vãa moeda* = "false money", i.e. not coin but *conto*.¹¹⁴ The date seems too late for *Virgo Maria*.

64. *Obv.*—Variant of No. 63. *Rev.*—Variant of No. 63. *Legend.* ♣COITV ♣COITV ♣COITV ♣COITV. Size 8. Schulman, Cat. 76, No. 2276, which is this specimen; Meili, No. 48. Jetton of the reign of John III.

65. *Obv.*—A shield, ensigned with a very small crown, flanked by S—S, and bearing fictitious arms: *Five estoiles in saltire within a bordure charged with fifteen castles*; all within a granulated inner circle. *Legend.* ♣EOYT¹¹⁵ ♣EIIOI¹¹⁶ ♣EOIT ♣EOIT. *Rev.*—An armillary sphere, with four circles of latitude, no

¹¹³ This suggestion is based on the analogous hortatory legends, often found upon French jettons, inculcating care and honesty in casting: such as *Contes loialement*; *Gardes vous de barat* (i.e. cheating); see Barnard, p. 47; or *Jettes justement* on a Low Country counter of c. 1422, in Dugniolle, *Le Jeton Historique des Pays-Bas*, Brussels, 1876-80, I, No. 45.

¹¹⁴ Cp. the French jetton legends *Je ne sui pas d'argent*; *Je suis faus et [de] mauvès[e] na[ture]*; Rouyer and Hucher, *op. cit.*, p. 28.

¹¹⁵ In this and the next piece E is in some cases used in error for L. In the first word here the V is punched over a T.

¹¹⁶ The II (i.e. N) and the O are transposed, and I is used for T.

zodiac, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* ♣ COIITV ♣ COIITV ♣ COITV ♣ COITV. Size 8. Meili, No. 50, which is this specimen. Jetton of the reign of Sebastian (1557-78). For the S on the obverse see No. 17, unless it is here the initial of the king, which from its position is perhaps less likely.

66. *Obv.*—Variant of No. 65. *Legend.* ♣ EOIT ♣ EIIOT ♣ EOIT ♣ EOIT. *Rev.*—Variant of No. 65. *Legend.* ♣ COIITV[s] ♣ COIITV ♣ COITV ♣ COITV. Size 8. Schulman, Cat. 76, No. 2279, which is this specimen; *cp.* Meili, No. 51.¹¹⁷ Jetton of the reign of Sebastian. It may be noted that the crown on these pieces has always been open, not arched. As Spener points out,¹¹⁸ it was not till after the time of Sebastian that the latter appeared in Portugal. This applies also to the coins, whereas in England, as we know, the closed crown was introduced into our coinage on the second silver issue of Henry VII, and into the French in 1516, on the *Teston* of Francis I.

67. *Obv.*—Within an interior inner circle five escutcheons in cross, each charged with an annulet; in each canton of the cross are S and an annulet. Two concentric *legends*, separated by a plain circle: (outer) ♣ CVITVS ♣ CVITVS ♣ CVITV ♣ CVITVS, (inner) ♣ CVITVS.PERA.CONTAR.E [probably for C]. *Rev.*—An armillary sphere, with four circles of latitude, no zodiac, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.*

¹¹⁷ Also Aragão, *Hist. Trar.*, No. 1530.

¹¹⁸ i, p. 282, § viii.

♣CONTVS♣CONTVS♣CONTVS♣CONTVS. Size 8. Gilt. Meili, No. 52, which is this specimen.¹¹⁹ Jetton of the reign of Sebastian. As to the S on the obverse, see No. 65. Double legends had appeared on Portuguese coins as early as Denis (1279-1325).¹²⁰

68. *Obv.*—Variant of No. 67, without the annulets in the cantons of the cross. *Legends* (outer): ♣CVIT♣ CVIT ♣ CVIT ♣ CVIT. (inner) CVITVS.PERA. CVIT [*ar*]. *Rev.*—Variant of No. 67. *Legend.* *CONTOS*COH—TOS*CONTOS. Size 8½. Schulman, Cat. 76, No. 2281, which is this specimen. Jetton of the reign of Sebastian.

69. Variant of No. 68. Size 8. Schulman, Cat. 76, No. 2282, which is this specimen. Jetton of the reign of Sebastian.

70. *Obv.*—Within an interior inner circle the five escutcheons of Portugal in cross cantoned by four castles.¹²¹ Two concentric *legends* separated by a granulated circle: (outer) ♣CONTV♣CONTV♣SCONT♣VSCON. (inner) ♣COH♣TVS♣COH♣TVS. *Rev.*—Variant of Nos. 68-9. *Legend.* ♣CONTVS♣CONTVS♣CONTVS♣CONTVS. Size 8. Jetton of the reign of Sebastian.

71. *Obv.*—Similar to No. 70, but four pellets surround the central escutcheon. Two concentric *legends*: (outer) ♣CONTV♣CONTV♣CONTV♣CONTV. (inner) CONTVS.PERA-CONTAR. *Rev.*—An armillary sphere, with four circles of latitude, no zodiac, and a terrestrial globe in the centre; all within a granu-

¹¹⁹ Cp. Amaral, p. 44.

¹²⁰ See Aragão, i, Pl. III, No. 1.

¹²¹ Cp. No. 42.

lated inner circle. *Legend.* ♣ CONTV ♣ CONTV ♣ CONTV ♣ CONTV. Size $8\frac{1}{2}$. Jetton of the reign of Sebastian.

72. (Pl. V.) *Obv.*—In the centre a small crowned head, full-faced,¹²² combined with four of the escutcheons of Portugal to form a cross, which is cantoned by four castles, each surrounded by three annulets; all within a granulated inner circle. *Legend.* * CONTV * DECO[n]TA * AR:FA3[er] * CONTA. *Rev.*—An armillary sphere, with five circles of latitude, the zodiac from right to left, and a terrestrial globe in the centre; all within a granulated inner circle. *Legend.* DEVISA:DE:R—DE:PVRTVGL. Size $8\frac{1}{2}$. Meili, No. 56, which is this specimen.¹²³ Jetton of the reign of Sebastian. The obverse legend reads "A casting-counter for making accounts".¹²⁴

73. (Pl. V.) *Obv.*—Similar to No. 75. *Rev.*—A small armillary sphere surrounded by little pellets, with two circles of latitude, no zodiac, and a terrestrial globe in the centre; all within a plain inner circle. *Legend.* ♣ CONTV ♣ DECO [n] T ♣ AR:ETEAR ♣ TE·A·A·R. Size $8\frac{1}{2}$. Meili, No. 57, which is this specimen. Jetton of the reign of Sebastian. If *etear* in the reverse legend is blundered for *otear*, see No. 34.

74. *Obv.*—Similar to Nos. 72, 73.¹²⁵ *Legend.* ⌘ CONTV ⌘ DECOT ⌘ AR:FA3 ⌘ CONTA. *Rev.*—

¹²² *Cp.* that on the reverses of Nos. 46, 47.

¹²³ For the reverse *cp.* Amaral, p. 15.

¹²⁴ *Cp.* *Por fer kum[pte]* on a fourteenth-century French jetton: Rouyer and Hucher, *op. cit.*, p. 15.

¹²⁵ It will have been noticed that the fictitious arms on many of the later of these *contos* are all more or less suggested by the coat of Portugal.

Similar to Nos. 72, 73. Size 9. Schulman, Cat. 76, No. 2285, which is this specimen. Jetton of the reign of Sebastian. For the obverse legend see No. 72.¹²⁶

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¹²⁶ As to the unexplained legends on Nos. 51-3, 55, 56, I have consulted well-known Spanish and Portuguese scholars both at home and abroad, but no one has been able to explain them. It seems likely that these inscriptions are prophylactic gibberish of the Abracadabra character. See, *e.g.*, those cited in *The Archaeological Journal*, xxvi, pp. 25-34; 149-57; 225-35; and xxxvi; also in Miss Joan Evans's *Magical Jewels of the Middle Ages*, 1922, pp. 123-6. If so, this may be the explanation of those that occur on so many Nuremburg casting-counters of the sixteenth century, examples of which are given in Neumann, *op. cit.*, v, Nos. 32418-75. *Caspar* (see No. 2, &c.) is found on amulets as a prophylactic word: instances are quoted by Miss Evans, pp. 125-6.

VII.

SOME NOTABLE COINS OF THE MUGHAL EMPERORS OF INDIA.

PART I.

[PLATES VI-VIII.]

It is my object in the present paper briefly to describe some recent discoveries in Mughal numismatics. I do not intend to be exhaustive, and will confine myself to developments of unusual interest and significance. Any reference to the zodiacal and portrait issues of the emperor Jahāngīr is omitted at present, because I hope to write on them before long in detail. I have continued to collect material since the production of my Panjab Museum Catalogue, published in 1914 at the Oxford University Press. For permission to describe individual specimens I am indebted to the kindness of the Keeper of the Coins, British Museum, the American Numismatic Society, the Director of the Coin Cabinet, Kaiser Friedrich Museum, Berlin, and of the private collectors named below. I also publish a number of coins from my own Cabinet which has recently been purchased by the British Museum (April, 1922).

REFERENCES.

- B.M.Cat. = Catalogue of Indian Coins in the British Museum, The Moghul Emperors, 1892.
I.M.Cat. = Catalogue of the Coins in the Indian Museum, Calcutta, Vol. III; Oxford, Clarendon Press, 1908.

P.M.Cat. = Catalogue of the Coins in the Panjab Museum, Lahore, Vol. II; Oxford, Clarendon Press, 1914.

L.M.Cat. = Catalogue of Coins in the Provincial Museum, Lucknow, Mughal Emperors; Oxford, Clarendon Press, 1920.

A.N.S. = Cabinet of the American Numismatic Society, New York. This now contains, on loan from the Metropolitan Museum, New York, the fine collection of Indian coins formed by Pandit Ratan Narain, an official of the Deputy Commissioner's Court, Dehli, during his long service. He died in or about the year 1887, and his collection was purchased by Mr. Durkee of Chicago. The Society is steadily adding to its Oriental collections.

Wh. = Cabinet of the author: purchased by the British Museum in April, 1922.

M.N.S.I. = Member of the Numismatic Society of India.

J.A.S.B. = Journal of the Asiatic Society of Bengal.

N.S. = Numismatic Supplement to the Journal of the Asiatic Society of Bengal.

H. = Hijrī (year).

R. = Regnal (year).

Wt. = weight (in grains).

Berlin = Coin Cabinet of the Kaiser Friedrich Museum, Berlin. The Muhammadan coins of India comprised in that fine cabinet consist almost entirely of the Guthrie Collection purchased by the German Government in 1876.

BĀBUR.

1. Dirham of URDŪ mint; duplicate of P.M.Cat. Pl. i, 1. Wh.

This issue is extremely rare; some four or five specimens are known.

2. Dirham of KĀBUL mint; type P.M.Cat., Pl. i, 1, but the arabesque in the bottom line hangs below it. The mint name is written thus *جہ*. Wh.

This type is new for Kābul mint, see reproduction of 18 (Pl. VI).

3. Dirham of type P.M.Cat., Pl. i, 1, with additional epithet *بدر* in the invocation. This seems to be a new

variety. There is another specimen in the Coin Cabinet of the Fitzwilliam Museum, Cambridge, which shows that the invocation extends to the left extremity of the exergue. It follows that this is a mintless type. Wh.

MINTLESS TYPES. The sequence of the mintless types is apparently on these lines :

4.	<i>Obv.</i>	<i>Rev.</i>
In quatrefoil the Kalima ;	In foliated circular area	
in margins names of the		بابر
four Imāms with their con-		محمد
ventional attributes.		ظهر الدين

Marginal legend :

بادشاہ اعظم و خاقان مکرم خلد الله تعالى ملكه

There may be variations of this marginal legend.

5.	<i>Obv.</i>	<i>Rev.</i>
As 4.	In circular area, usually foliated	
		بادشاہ
		محمد
		الدين بابر
		ظهر

In margin : السلطان الاعظم

6.	<i>Obv.</i>	<i>Rev.</i>
As 4.	In circle	
		غازی
		شاه
		الدين محمد باد
		ظهر بابر

Margin السلطان الاعظم خاقان المکرم ملکہ و سلطانہ

The increasing elaboration of the reverse legend is a clear indication of Bābur's rising star. At least some coins of types 4 and 5 were struck before Bābur's advent

in India. Type 6 is comparatively abundant. It is usually dateless as well as mintless, but one or two specimens are known with date 935 in the reverse field—P.M.Cat., 20. There is also the exceptional variety, P.M.Cat., 30, of which two or three specimens exist.

7. I illustrate a Bābur dirham of Tatta mint from the Guthrie Collection, Berlin. (Pl. VI.) I invite a reference to Professor Hodivala's remarks in *N.S.* xxxiv. p. 212 ff. The mint name of this specimen seems to be Tatta.

Berlin.

The interactions between the house of Bābur and the Timurid dynasty, known as the Shaibānids of Bukhāra, whose coins largely remain a virgin field, are illustrated by numismatic evidence, one family counterstriking coins of the other. The following is an instance.

8. Dirham of Muḥammad Shaibān of Herāt mint counterstruck with محمد بابر ظاهر الدين in small cartouche.

Wh.

AR 1. Wt. 59.

HUMĀYŪN.

The Kalima on the dirhams of Humāyūn is sometimes found with the addition

الله يرزق من يشاء بغير حساب

"God is bountiful to whom He pleaseth without measure."

Qurān, Sura II, 208.

In the case of ĀGRAH mint the change to the more elaborate type takes place in the year 943. I have dirhams of this year of both types.

The dirhams of KĀBUL mint published in the P.M.Cat. have the Kalima with the addition—see 53 and 54.

9-10. I illustrate an unusual Kābul type with a variety, both coins of the year 952. (Pl. VI.)

11. There is also a coin of type P.M.Cat., Pl. i. 53, without the addition to the Kalima. Wh.

12. This is a duplicate of B.M.Cat., Pl. i. 18, a very scarce and unusual type, from the Cabinet of the American Numismatic Society. In style it closely resembles the Champānīr dirham, P.M.Cat., Pl. i, 44, and may well hail from that part of India.

13. This dirham from the Guthrie Collection, Berlin, is the only coin of Humāyūn known to me which exhibits his *laqab* Naṣīru-d-dīn. The mint is unfortunately illegible. (Pl. VI.) Berlin.

Dirhams of Humāyūn's first reign are usually found of Lāhor mint. It is difficult to get a dated specimen of types other than that illustrated at I.M.Cat., 18, because the date is at the bottom of the reverse field and is generally off the flan. I have seen years 941 and 944.

Humāyūn was defeated by Sher Shāh Sūr and driven out of India in A.H. 947; he did not recover the sovereignty of Hindūstān till the ninth month of A.H. 962. He died at Dehlī, from the effects of an accidental fall, in the third month of the year 963. Coins of Humāyūn's restoration period are very scarce, but a large find of dirhams which was brought into India over the N.W. Frontier in the year 1920 yielded several specimens, one or two of which are of new types. Pieces in better preservation show that the Lāhor dirham (P.M.Cat., Pl. i. 61) is of year 962, the figure ۱ coming between the ۱ and the ۷. Mr. H. Nelson

Wright, I.C.S., has a coin exactly of this type but of year 963. At I.M.Cat, p. lxi, Mr. Nelson Wright has observed 'The only Sūrī who struck coins at Lāhor was Sikandar Shāh. These were rupees of the Sūrī standard of 180 grains, but on his return Humāyūn reverted to the dirham (L.M.Cat., p. 7) of which the British Museum has a specimen weighing as much as 111 grains (No. 13).' The L.M.Cat. reference is to Mr. C. J. Rodgers' Lahore Museum Catalogue, 1893. Restoration period dirhams are absent from the British Museum Catalogue, and the weights of B.M.Cat., 12, 13, 14, 15 are all forty grains in excess, probably by a printer's error.

14. I illustrate a dirham of LĀHOR mint of a new type, year 963, in my own collection. (Pl. VI.) The only duplicate of this coin known to me came from the same find, and is in the Cabinet of Mr. V. D. B. Taraporevala, Bombay.

15. This is a beautiful dirham in my Cabinet of mint Ḥaẓrat DEHLĪ, year 962, new and unpublished. I know of one other specimen.

<i>Obv.</i>	<i>Rev.</i>
In circle the Kalima : in five marginal compartments.	The letter ل of تعالٰی is produced to form an oblong with circular projections. Within this area
.....	بادشاه غازى
بىخاى عثمانى	محمد همايون
يعلم على	Above سلطان الاعظم
رضى الله عنهم	To r. المكرم تعالٰی
	Below ذاتة و ملكه و سلطانة ضرب حضرت
	To l. reading upwards دهلے خلد (الله)
At 1.05.	Wt. 74. (Pl. VI.) Wh.

The invocation is in the unusually full form.

خدا الله ذاته و ملكه و سلطانه

"May God perpetuate his person; and his kingdom, and his dominion."

There seems to be no doubt about the correctness of this reading with which Mr. J. Allan and Mr. A. S. Fulton of the British Museum agree. The marginal legends are exactly like those of the five mohur piece of Akbar, B.M.Cat., Pl. ii, 23. Mr. Stanley Lane-Poole recognized that there was an additional word in the invocation but did not elucidate it. The invocation is also found in this form on some, if not all, of Humāyūn's Kābul dirhams, the Āgrah dirhams with the addition to the Kalima, the Lāhor dirhams of his restoration period, and on some dirhams of Akbar which are described below. I regret that I failed to identify this new invocation in my Panjab Museum Catalogue, but the correct solution could scarcely have been attained without the help of better specimens, and has been delayed owing to the scarcity of the material.

16. A dirham, unfortunately clipped, which is probably of mint Ḥaẓrat DEHLĪ but of year 963. Wh.

17. A half-dirham of year 96-, which bears the unique expression سكه مرادی 'small change'. Wh.

Obv.
As 15.

Rev.
In oblong

محمد همايون ...

To r.

92-
ملكه

Below

سكه مرادی ...

AR .85. Wt. 35. (Pl. VI.) Wh.

The expression سكه مرادی is quite new for a Mughal coin. Mr. J. Allan agrees with my reading.

18. At No. 6 of his paper "Some Coins of the Mughal Emperors", *Num. Chron.*, 1902, Mr. Longworth Dames published an unusual dirham of Humāyūn, the mint of which was off the *flan*. I have three specimens, one of which (Pl. VI) shows that the mint is KĀBUL written thus جہ — compare 2 above. Dates are wanting but the type resembles 17 and I suspect it belongs to Humāyūn's restoration period.

19. Mr. V. D. B. Taraporevala possesses a dirham (or half-dirham) closely resembling 17 but of Kandahār mint.

20. Coin (B.M.Cat., Pl. i, 11) shows that Humāyūn, after his restoration, struck thick rupees of the Sūrī standard, but numismatists knew of only this specimen which is dated 962. Mr. G. B. Bleazby discovered another but unluckily lost it. However, there is a specimen in the Cabinet of the American Numismatic Society, dated 963.

21. Since writing the above I was delighted to find this very fine heavy rupee of Humāyūn's restoration period in the Guthrie Collection, Berlin. The date is 962 and mint Āgrah (Pl. VI). The piece (B.M.Cat., Pl. i, 11) belongs to the same issue and appears to have been struck from the same dies. The coin of year 963, mentioned at 20 above, seems also to be of Āgrah mintage.

AR 95. Wt. 173.

Berlin.

AKBAR.

CENTRAL ASIAN FABRIC.

DIRHAMS.—At the commencement of his reign Akbar struck dirhams on the Timurid model, but these were soon replaced by thick rupees based on the Sūrī currency, and are extremely scarce.

22-23. I illustrate a new and unpublished dirham of mint Ḥaẓrat DEHLĪ, date 963. The style and legends are exactly those of No. 15 above, except the inscription in the reverse area which is

اکبر بادشاہ غازی
محمد جلال الدین

The figure ۱ is on the outside of the left margin, ۲ inside the area to left, and ۳ in the right margin as shown on 23.

AR 1. Wt. 63 (clipped). (Pl. VI.) Wh.

24.	<i>Obv.</i>	<i>Rev.</i>
	Kalima in double foliated pentagon. Legends in the five marginal compartments as 15.	In oblong with lobe in middle of each side
		اکبر بادشاہ محمد جلال الدین
		Figure ۱ to left of bottom line and ۲ to right.
		Marginal legends much as 15 with ordinary (?) 'invocation and
		ضرب ۱ کابل
		Mint KĀBUL; date 964.

AR 1. Wt. 71. Wh.

25.	<i>Obv.</i>	<i>Rev.</i>
	As 24.	Legends as 24, but superior style; figures ۱۱ outside left bottom corner of area; letter ح in right of area.
		Mint KĀBUL; date 966.

AR 1. Wt. 71. Wh.

A specimen given by Lieut.-Col. the Hon. Milo Talbot, C.B., to the British Museum, shows the date 966 distinctly.

26. *Obv.* As 15. *Rev.* Much as 25, but ordinary invocation and area is a rectangle with truncated corners; no date visible. Mint KĀBUL.
- AR .8. Wt. 32. Wh.
27. *Obv.* Kalima in double foliated pentagon. Legends in the five marginal compartments as 15. *Rev.* In oblong with three lobes at each end
- اکبر بادشاہ غازی
جلال الدین
خلد الله تعالى
Above
ملکہ و سلطانہ ضرب
Below
No date visible; mint KĀBUL.
- AR 1.05. Wt. 71. Wh.

Coins 24-27 are dirhams and a half-dirham of Kābul mint. The addition of the word غازی on 27 shows that it is probably later than the others—compare the Lāhor dirhams below. Coin (I.M.Cat., Pl. iv, 316) is undoubtedly a half-dirham of Kābul mint.

28. Like 29 but very poor style; date 962. Mint not visible. Wh.

29. *Obv.* In double square with three foliations in each side, the Kalima; above the second of محمد. Marginal legends as on 15. *Rev.* In double rectangle with lobe in middle of each side
- اکبر بادشاہ
محمد
جلال الدین
Surrounding legend as on 15 but لاہور. Mint LĀHOR; date 963.
- AR .95. Wt. 61 (slightly clipped). Wh.

30. As 29, but π over ج of جلال. Wh.
31. As 29, but ν over δ of شاه. Wh.
32. As 29, but no mark on obverse and π to right of δ of باد. Wt. 72. Wh.
33. As 29, but Kalima in double foliated pentagon. Wh.
34. As 29, but additional title غازی to left of بادشاه and date 964; ν under شاه of شاه and π over ج of جلال. Wh.

35. As 34, but areas are single lined and shaped as 15 : date 965, the figures being arranged as 30. Wh.

Dirhams 29 to 35 are of Lāhor mint, dates 963, 964, and 965. All the dirhams described above with the exception of 7, 8, 12, 13 came from a find of between five and six hundred dirhams which was brought into India from over the N.W. Frontier in the year 1920. I have already referred to it above. Most of them were issues of the so-called Shaibānids of Bukhāra, but the find included a comparatively large number of dirhams of Bābur, Humāyūn, and Akbar.

NORMAL ISSUES.

Gold.

36. URDŪ ZAFAR KARĪN.—There is a very fine mohur of this mint in the Indian Museum, Calcutta, dated 984, which was long unique—see I.M.Cat., Pl. ii, 100. There are now two others of similar type but of year 985, one in the British Museum and the other in the Cabinet of the American Numismatic Society. I illustrate the latter. (Pl. VI.)

37. *ĀGRAH*.—The very rare mohur with the *Nūr ‘alī Nūr* couplet illustrated in B.M.Cat., Pl. v, 175, is of year 51. The Cabinet of the American Numismatic Society has specimens of years 50 and 40, the latter being an abnormally early date for this type.

Obv.
نور
شاه
اکبر باد
مهر
ازست
زر ۵۰

Rev.
نور علی
بران زر نام شه نور
ضر آگره

A.N.S.

The couplet is

زرست از مهر اکبر بادشاه نور
بران زر نام شه نور علی نور

“Gold is bright with the stamp of the emperor Akbar,
The name of the king on that gold is ‘Light upon light’.”

There is also a specimen of the year 50 in the Tremlett Collection, Fitzwilliam Museum, Cambridge.

38. I knew of no other specimen of the *dīnār i jalālī* than the White-King specimen—see White-King Sale Catalogue, Part II, 3499—till I visited New York in 1921 and saw another in the Cabinet of the American Numismatic Society, which I am permitted to illustrate. The date is 50 of the *ilāhī* (divine) era, month Mihr; the mint is *Āgrah*.

Obv.
عالم
نام اکبر شاه
ز مهر
ضرب آگره

Rev.
دینار جلال
سعادت یافت اله
مهر ۵۰

N. 85. (Pl. VI.)

A.N.S.

The couplet is

سعادت یافت دینار جلالی
ز مهر نام اکبر شاه عالی

The *dinār i jalālī* won felicity

From the stamp of the name of the exalted king Akbar.

39. The Āgrah gold couplet I shall now describe is not so rare as the two above mentioned. It is illustrated in existing Catalogues, is consequently better known, and has been found of the following dates:

49 Āzar. B.M.Cat., Pl. v, 169 and Fitzwilliam Museum, Cambridge.

49 Dī. P.M.Cat. and A.N.S.

49 Bahman. A.N.S.

49 Isfandārmuz. P.M.Cat. and B.M.Cat.

50 Khurdād. B.M.Cat.

50 Tīr. A.N.S.

50 Amardād. L.M.Cat.

There is a very fine coin of date 50, month Tīr, in the Cabinet of the American Numismatic Society.

The couplet is

مهر مهر شاه اکبر ابروی این زر است
تا زمین و آسمان را مهر انور زیور است

The sun of the stamp of king Akbar is the honour of this gold
As long as the shining sun ornaments the earth and sky.

40. PATTAN.—There is little doubt that the correct reading of the mint on the mohur illustrated in B.M.Cat., Pl. iii, 61 is Pattan with epithet *Shahr*. A silver coin of this scarce mint is shown at L.M.Cat., Pl. ii, 320. I describe below copper coins of two types.

41-43. The British Museum Cabinet contains two square mohurs of PATNA mint, dates 986 and 987, and a square mohur of JAUNPŪR mint, date 988. The last-named is the specimen published in N.S., v.

44. There is a square mohur of Jaunpūr mint in the Cabinet of the American Numismatic Society on which the mint-name is associated with the epithet *Dāru-s-saltanat*. This is a new fact to be reckoned with. The entire mint-name is not shown, but the reading Jaunpūr is reasonably certain. The date 985 is plainly legible in the bottom margin of the obverse. (Pl. VI.)

45. HĀJĪPŪR.—The Akbar mohur of Hājīpūr was one of the gems of the Bleazby Collection, now in the British Museum. Mr. Bleazby published it in *N. S.*, v, but the coin deserves republication. (Pl. VI.) It is, I believe, still unique. Hājīpūr is on the Ganges a little above Patna, and figures conspicuously in the history of the struggles between Akbar and his rebellious Afghān governors of Bengal.

46-49. Gold *ilahī* coins of LĀHORMINT are uncommon. There are now four in the British Museum of dates 35 DI, 47 Tīr, 49 *Shahrewar*, and 50 *Amardād*, all full mohurs.

50-51. The celebrated Rāma-Sītā gold coins of half-mohur size are extremely rare, not more than three or four specimens being known. I invite a comparison of the British Museum specimen—*B.M.Cat.*, 172—with that in the Bibliothèque Nationale, Paris—illustrated at *P.M.Cat.*, Pl. xxi, ii. They seem to be from the same dies, and it is quite possible that the Nāgari legend, *Rāmasatya* has been erased from the British Museum coin at some period since its issue.

52. I may just mention that the Ratan Narain Collection contains a hawk mohur of AṢĪR mint, probably from the same dies as the superb coin illustrated in

the British Museum Catalogue. There are about a dozen specimens known of this celebrated commemorative issue. A splendid piece is in the Guthrie Collection, Berlin. A.N.S.

53. It gives me much pleasure to be permitted to publish this fine and unique hawk mohur of Āgrah mint in the Guthrie Collection, Berlin.

<i>Obv.</i>	<i>Rev.</i>
In triple circle on floral field	In triple circle on floral field
الله	hawk to left.

الشير
٤٧
فروردین الهی
ضرب اءاره

A⁷ 85. Wt. 168. (Pl. VII.) Berlin.

This is one of the unexpected discoveries which makes the study of Mughal numismatics so fascinating. The piece is a companion to the hawk mohur of Asīr mint—a dozen or so known, all of year 45, month Isfandārmuz, illustrated in B.M.Cat., 166—and to the duck (or goose) mohur of Āgrah mint, still unique, illustrated in B.M.Cat., 173.

Silver.

54. A round *ilahī* coin of Aḥmadābād mint, no dates visible. B.M.

Wt. 16.5.

55-57. *Ilahī* rupees of ĀGRAH mint are rare. The British Museum has specimens of the first, third, and fourth months of the forty-fourth year.

58. The *rūpiya* of ĀGRAH mint in the Bodleian Cabinet, Oxford, is illustrated in P.M.Cat., Pl. xxi.

It has long remained unique, but in 1920 I acquired another of the same year, but the next month; year 47, month Tīr. Wh.

59. I illustrate a specimen of the type of the very rare *mehrābi* gold issue illustrated in B.M.Cat., 168, in the Guthrie Collection, Berlin, but it is struck in silver. It is the only silver *mehrābi* coin known to me, and I doubt very much whether there was ever a regular silver issue of this shape. Possibly this coin was in the nature of a proof piece. (Pl. VII.) Berlin.

60. I illustrate the very scarce *ilahī* quarter rupee of ILAHĀBĀD mint now in the British Museum. The month is Dī, but the year is off the coin.

R 45. Wt. 42.2. (Pl. VII.)

61. PATNA.—There is a nice quarter rupee of Patna mint, date 44 Amardād, in the British Museum Cabinet.

62–65. DEHLĪ — Noteworthy *ilahī* issues of the Dehlī mint in the British Museum are a round rupee dated 47 Khūrdād, a square half rupee of year 40, month Bahman, and two square quarter rupees of dates 38 Abān, and 42 Tīr respectively.

66–67. There is a noteworthy type of year 987 known in the quarter rupee size and square shape, and of mints AḤMADĀBĀD, FATHPŪR (Bodleian Collection), and LĀHOR (B.M.) mints. I illustrate the Fathpūr specimen. (Pl. VII.)

68. LĀHOR.—On Humāyūn's anonymous copper coins of the standard instituted by Bahlol Lodī, Sultan of Dehlī, the mint-name Lāhor is attended by an epithet *Dāru-l-khilāfat*. This epithet was revived by Akbar

on gold coins of year 976—see P.M.Cat., 155. The copper coins of the year 976 had another epithet *Dāru-s-saltānat*—P.M.Cat., 748. The silver type of years 971 to 978 inclusive is illustrated in P.M.Cat., 381, but I have never seen a specimen with the left upper margin sufficiently exposed to be quite certain whether the mint-name on all or any of these rupees is or is not attended with an epithet. It has always been assumed that there is no epithet on this type. The die in every case is much larger than the *flan*, and the marginal legends are usually very much mutilated. With regard to the change of epithet from *Dāru-l-khilāfat* to *Dāru-s-saltānat* on the gold and silver coins, Mr. Nelson Wright merely said that: "After 976 Lāhor again assumes the epithet of *Dāru-l-khilāfat*. In 985 were issued square rupees and muhars, and the honorific epithet was changed to *Dāru-s-saltānat*, an epithet which is associated with the Lāhor mint to the end of the Mughal series"—I.M.Cat., p. lxi. I followed Mr. Nelson Wright in this respect—P.M.Cat., pp. ci and cii—but am now able to indicate the change on the silver currency with some accuracy. In N.S., v, Mr. G. B. Bleazby published an interesting rupee of Lāhor mint (now in the B.M.), which he attributed to the year 997, but the date is undoubtedly 979. The mint-name is attended with an epithet which I read as *Dāru-s-saltānat*. The succeeding type of the year 980 is described in P.M.Cat., 386, and a rupee of this type of the year 981 is illustrated—P.M.Cat., 387. At 392 I have suggested that coins of similar type, though with a different arrangement of the date, of years 983, 984, 985, 986, are also of Lāhor mint. I have lately acquired a specimen of date 984 which removes all

doubt of this attribution to Lāhor. A careful examination also reveals the fact that on all these rupees of years 980 to 986 the mint-name is attended by the epithet *Dāru-s-saltānat*, a fact which has already been surmised (for a rupee of year 984) by Mr. C. J. Brown—L.M.Cat., 557. Hence I conclude that on the rupees the epithet *Dāru-s-saltānat* runs through from the year 979 and is continued on the square issue which begins in 986—P.M.Cat., 393.

69. MĀLPŪR.—I illustrate the very rare rupee of *Dāru-l-khilāfat*, Mālpūr mint (by the way the reading Mālpūr has been queried by Professor Hodivala in *Numismatic Supplement*, xxxiii. 33 and xxxiv. 177), formerly in the Bleazby Cabinet, now in the British Museum. It is of the familiar dotted square areas Aḥmadābād type, and the date is 984. (Pl. VII.)

Copper.

70. I illustrate a copper *dām* of mint AKBARPŪR. On one side is the date 98— and on the other above the mint-name Akbarpūr is the legend ... جل جلاو. This is possibly جلاو جلاو *jalla jalwuhu*, which would be an unusual alternative form of the Divine Era invocation جل جلاله.

Æ. 7. Wt. 317. (Pl. VII.) B.M.

71. *Obv.*

دار الخلفه آكره

.....

٩٨٢
ضرب فلوس

Rev.

دو

هشتاد و

.....

فی نهصد و

٩٨٢

سنه

Wh.

72. As 71, but date 987.

Wh.

Coins 71 and 72 are *dāms* of mint *Dāru-l-ikhilāfat* ĀGRAH, dated 982 and 987, of the dotted line Aḥmadābād type. The curious thing about them is the fact that the date is expressed no less than three times, once in words and twice in figures.

73. I possess a *dām* which shows quite clearly that type P.M.Cat., 879, tentatively attributed to ALWAR mint, bears that mint-name.

Wh.

74. A *dām* of mint PATTAN with epithet Shahr; date 984.

Obv.	Rev.
شهر پتن	چهار
.....	هشتاد
ضرب فلوس	.....

Æ. 85. Wt. 314. (Pl. VII.) Wh.

75. A *dām* of mint PATTAN with epithets Shahr Anhirwālah; date 985.

Obv.	Rev.
[شهر] پتن	پنج
انهر والد	هشتاد
.....
ضرب فلوس	نہصد و
	۹۸۵

Æ. 9. Wt. 313. (Pl. VII.) Wh.

I came into possession of this coin when I purchased the Mughal collection of the late Dr. G. P. Taylor, of Ahmadabad, India. It was first published by Dr. Taylor himself in the twenty-fourth *Numismatic Supplement* to the *Journal of the Asiatic Society of Bengal* (*J.A.S.B.*,

1914). My object in republishing is to record a remark on the epithet of the mint town. The traditional founder of the city Pattan, now in the Baroda State, was the shepherd Anhil, and for this reason the place received the name Anhilpūr or Anhilvādā, the word Pattan or Pātan merely signifying "town". The epithet would supply the variants Anhalwārah, Anharwālah, Naharwālah, Nahrwālah. Paying due regard to the orthography of the name of the founder I submit that the epithet as found on the coins ought to be transliterated Anhirwālah.

76.	<i>Obv.</i>	<i>Rev.</i>
	دهلی	د و
	حضرت	ہشتا یک

	پ	نہد و
	ضر فلوس	سنہ
	Æ. 95. Wt. 312.	Wh.

This is a *DEHLĪ dām*, dated 981, of the *Aḥmadābād* pattern; another specimen is in the British Museum, and there is a very fine one in the Fitzwilliam Museum, Cambridge.

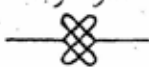
77.	<i>Obv.</i>	<i>Rev.</i>
	تنکہ اکبر شاہ	۴۳ الہ
	ب	ما دی
	ضر دہلی	
	Æ. 1.2. Wt. 620. (Pl. VII.)	B.M.

This is the only full *tanka* of *DEHLĪ* mint known to me and I am glad to be able to publish a reproduction of this magnificent specimen. It is of year 43, month DĪ, and was first published by Mr. C. J. Rodgers in his paper "Copper Coins of Akbar", *J.A.S.B.*, 1880, as

belonging to Mr. Denzil Ibbetson, I.C.S. The latter officer afterwards became Sir Denzil Ibbetson, K.C.S.I., Lieutenant-Governor of the Punjab. His rarer coins have recently been acquired by the British Museum from his daughter Miss Ruth Ibbetson.

78. Late in Akbar's reign came the *ilāhī* issues of four, two, and one *tānke* or *tanke* pieces from the Āgrah, Aḥmadābād, Kābul, and Lāhor mints. Quoting from Blochmann's *Ain i Akbari*, Professor S. H. Hodivala has shown that the *tānke* or *tānke* is the tenth part of the *tanka*—*N.S.* xxvii.

I recently picked up in Saharanpur City a four *tanke* piece of DEHLĪ mint. It is unluckily in very poor condition but the type and mint name are certain. Wh.

79.	Obv. دمرا ضرب 	Rev. ۳۸ الہی ماہ مہر
	سری نگر Æ. 7. Wt. 85. (Pl. VII.)	Wh.

This is a *damrā* of SRĪNAGAR (Kashmīr) mint; year 38, month Mihr.

80.	Obv. سنبل فلوس ضرب	Rev. ۳۷ الہی سنہ
	Æ. 85. Wt. 319. (Pl. VII.)	Wh.

This is a *dām* of SAMBAL mint; year 37, no month.

81. The British Museum possesses a good specimen of the issue whose mint was read by Mr. H. Nelson Wright

as *Kaṣba* Amīrkot—I.M.Cat., Pl. iv, 371. Mr. S. H. Hodivala cannot accept Dr. Codrington's identification of this mint town with Amarkot in Sind, Akbar's birth-place, and in fact even the mint reading Amīrkot is not certain. I have never seen a specimen which clearly shows the beginning of the name, which might be Mīrkot or even Sherkot.

82.	<i>Obv.</i>	<i>Rev.</i>	
	کوت	.....
	شیر	نہصد و	
	فلوس	سنة	
	ضرب	۹۸۹	
	Æ. .8. Wt. 319. (Pl. VII.)	Wh.	

The mint of this coin is clearly SHERKOT. I already possessed a specimen in which the top of the obverse is not so plain, and following the readings of Mr. Oliver and Mr. C. J. Rodgers as repeated in the Mint Tables of Mr. R. Burn and myself, also in my Catalogue of Mughal Coins in the Panjab Museum, I had read the mint name as Sherpūr. It seems to me that the reading Sherpūr must now be replaced by Sherkot, which also may be preferable for the present to the reading Amīrkot for the coins of issue 81 above.

83.	<i>Obv.</i>	<i>Rev.</i>	
	دار الخلافۃ	ہفت	
	ب کالپی	ہشتاد	
	ضرب	۹۸۷	
	فلوس	نہصد	
	Æ. .8. Wt. 324. (Pl. VII.)	Wh.	

This is a *dām* of KĀLPĪ mint of year 987 with epithet *Dāru-l-khilāfat*.

84.	<i>Obv.</i> گوالیر فلوس ضرب	<i>Rev.</i> ۳۹ اله اذر
-----	--------------------------------------	------------------------------

Æ 75. Wt. 155.

B.M.

A half dām of GWĀLIYAR (Gwalior) mint, year 39, month Āzar.

85.	<i>Obv.</i> لاهور ضرب فلوس عدل	<i>Rev.</i> هفت هفتاد نهمد ۹۷۷ سنه
-----	--	---

Æ 8. Wt. 318.

Wh.

I lately acquired a good specimen of the coin published in I.M.Cat., 545 and 546, which quite plainly bears the reading above. The mint is LĀHOR and the date 977. I do not know any other instance of the use of the word عدل on Akbar's coinage, but invite a reference to its appearance on the Kābul *fulūs* of Jahāngīr, P.M.Cat., 1208.

86.	<i>Obv.</i> In double circle ,	<i>Rev.</i> In double circle, five-armed geometrical device.
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بع
Æ .6. Wt. 75.5. (Pl. VII.) B.M.

This coin bearing the denomination *rub'*, quarter piece, is new to numismatics. The *niṣfe* or half is well known—I.M.Cat., 560 ; P.M.Cat., 849.

JAHĀNGĪR.

Gold.

87.	<i>Obv.</i> شاهی نگیر نثارچہا	<i>Rev.</i> اجمیر ضرب ۱۰ سنه
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A. 8. Wt. 17.

B.M.

This beautiful square gold *niṣār* of AJMER mint, tenth year, was one of the gems of the Bleazby Collection now in the British Museum. I published a reproduction of it in P.M.Cat., Pl. xxi, x. Mr. H. Nelson Wright has a small round gold *niṣār* of Āgrah mint. I do not know of any other gold *niṣārs* of the emperor Jahāngīr.

88-90. The well-known "East and West" couplet gold issue of Aḥmadābād—P.M.Cat., 891—is exemplified in the British Museum by pieces bearing dates 1028 H., 14 R.; 1029, 15; 1030, 15.

91. There is a gold piece of Jahāngīr and his consort Nūr Jahān of Aḥmadābād mintage, dates 1037, 2— in the Punjab Museum—P.M.Cat., 919—which I described at p. xxxv of that publication as unique. I discovered another at New York of dates 1034, 19 which I now illustrate. (Pl. VII.) A.N.S.

92.	<i>Obv.</i>	<i>Rev.</i>
Infoliated octagon on flowered field	Contained as obverse	

بادشاه
اکبر
نگیر ابن
جهان
شاه نورالدین

8 ماه
مهر
شاهزاد
در
زد باگرة

AV. .1. Wt. 206. (Pl. VII.)

B.M.

The couplet is

سکه شاهی زد باگرة زد بزر در مهر ماه

شاه نورالدین جهانگیر ابن اکبر بادشاه

Struck royal coin in ĀGRAH on gold in month Mihr, Shāh Nūru-d-dīn Jahāngīr, son of the emperor Akbar.

The date is 1019, 5.

The coin belongs to the issue published as "A New Couplet Muhar of Jahāngīr" in *N.S.* xxv (*J.A.S.B.*, 1915), and has been in the British Museum Cabinet since the year 1893. It was acquired from Mr. C. J. Rodgers who published the couplet on p. xi of his *Coins of the Mogul Emperors of India in the Panjab Museum*, 1893.

93. This is a very fine and, as far as I know, new heavy couplet mohur of Āgrah mint, date 1019, 5, month Azar. Mr. Nelson Wright has justly remarked that Jahāngīr's couplet coins of this year are the finest pieces of the Mughal series.

Obv.
Infoliated diamond contained
in triple circle with ara-
besques in the segments,
on floral field

شا
ابن
جهانگیر
زمان شاه
شهنشاه

۱۰۱۹

سنة

Rev.
Contained as obverse

بحر و بر
شاه
زد در ماه
اذر
بالله

A. 1. *Wt.* 209. (*Pl.* VIII.)

Guthrie Collection, Berlin.

The couplet is

بالله سلّة زد در ماه اذر شاه بحر و بر
شهنشاه زمان شاه جهانگیر ابن شاه البحر

At Āgrah struck coin in the month Azar, the sovereign of
sea and land,

The king of kings of the Age, Shāh Jahāngīr, son of Shah
Akbar.

94.	<i>Obv.</i>	<i>Rev.</i>
	Within ornate square design	Contained much as obverse
	شاه اکبر شاه	۱۰۲۰
	جهانگیر	ضرب
		آگره
		۶
		سنة
	A. 1. (Pl. VIII.) Guthrie Collection, Berlin.	

95.	<i>Obv.</i>	<i>Rev.</i>
	اکبر شاه	ضرب آگره الهی
	نگیر شاه	ماه شهریور
	نور الدین جها	۸
		سنة
	A. 7. Wt. 83.2.	B.M.

This is a half-mohur of mint ĀGRAH, year 8, month Shahrewar.

Silver.

96.	<i>Obv.</i>	<i>Rev.</i>
	قبول	احمدآباد
	خیر	۱۰۳۳
	۱۸	ضرب
	سنة	سنة
	Wt. 9.6. R. 375. (Pl. VIII.) Wh.	

Specimens of the largesse issue with superscription *khair qabūl*, "may these alms be accepted", are very rare. This is a unique piece of AHMADĀBĀD mint.

97.	<i>Obv.</i>	<i>Rev.</i>
	In triple circle	In triple circle
	جهانگیر	چاو س
	۱۰۲۷	۱۲
	نشار	سنة
		احمدآباد
		ضرب
		Bibliothèque Nationale, Paris.

98.	<div style="text-align: center;"> <u>جهانگیری</u> <u>نیشار</u> 19 جلوس سنه </div>	<div style="text-align: center;"> <u>احمدآباد</u> <u>ضرب</u> 1032 سنه </div>
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A.N.S.

Two silver *niṣārs* of AḤMADĀBĀD mint, the first of which is differently arranged from P.M.Cat., 1185.

99.	<div style="text-align: center;"> <i>Obv.</i> غاز — بادشاه نیشار جها 18 </div>	<div style="text-align: center;"> <i>Rev.</i> ضرب اجمير 1032 سنه </div>
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R. .4. Wt. 23. (Pl. VIII.)

Guthrie Collection, Berlin.

This is a small silver piece of Ajmer mint, date 1032, 18.

100. There is a variety of the very rare Ajmer rupee, P.M.Cat., 920, of the same dates, in the Guthrie Collection, Berlin. (Pl. VIII.)

101.	<div style="text-align: center;"> <i>Obv.</i> In triple circle جهانگیر — نشار 1032 </div>	<div style="text-align: center;"> <i>Rev.</i> In triple circle اگر — لخ لافه دار 18 ضرب </div>
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R. .45. Wt. 27.

B.M.

A silver *niṣār* of ĀGRA mint with a different obverse from that of P.M.Cat., 1186.

102. <i>Obv.</i>	<i>Rev.</i>
In circle within a square with arabesques in corners	Contained as obverse
اکبر ۱۰۲۰ ش	مہ ارد
نگیر ابن	باگرہ در
چہ	بہشت این
زمان شاہ	کد زد
شہنشاہ	بر زر ۶

R. 95. Wt. 218.

B.M.

A heavy square couplet rupee struck at ĀGRAH in month Ardībihisht, date 1020 H., 6 R. The couplet is

این سکہ زد باگرہ در مہ اردی بہشت بر زر
 شہنشاہ زمان شاہ جہانگیر ابن شاہ اکبر

Struck this coin at Āgrah in the month Ardībihisht on gold, King of kings of the age Shāh Jahāngīr, son of Shāh Akbar.

103. The British Museum has a quarter of the heavy rupee issue of ĀGRAH mint with the *sākht nūrānī* couplet—see P.M.Cat., p. xlvī—of date 1014 H., 1 R.; weight 49 grains.

104. I illustrate a rupee in my Cabinet with the usual couplet of Jahāngīr and Nūr Jahān, but of mint ILAHĀBĀD and date 1037, 22 (Pl. VIII). The first coin of this issue was discovered by Mr. C. J. Brown, Canning College, Lucknow, and my specimen comes from the same hoard. The arrangement of the legends is somewhat different from that on Mr. Brown's specimen though both Hijri and regnal years are the same.

105–107. The British Museum Cabinet contains a small silver piece of BURHĀNPŪR mint of normal type,

year 1020, month Mihr, weight 14 grains; also a half rupee of PATNA, date 1031, 17, month Farwardīn, and a quarter rupee of the same mint, date 1027, 13, month Āzar.

108. I illustrate a fine specimen of the very rare heavy couplet rupee of PATNA mint, date 1019, 6, which is in the Cabinet of the American Numismatic Society. (Pl. VIII.)

The couplet has been published on p. x of Mr. C. J. Rodgers' Panjab Museum Catalogue of the Coins of the Mogul Emperors of India, Baptist Mission Press, Calcutta, 1893, and in L.M.Cat., p. 23.

109.	<i>Obv.</i>	<i>Rev.</i>
	جهانگیر شاہ	و ماہ
	س م	مہر
	نگرنا ابدار	بود نور دہ
	نگر	سکہ
	ضرب جہا	

Ar. .35. Wt. 22. (Pl. VIII.) B.M.

This small square silver piece of JAHĀNGĪRNAGAR (Dacca) mint is new. All that I can read upon it is

سکہ بود نور دہ مہر و ماہ
آبدار باسم جهانگیر شاہ

May coin be the light-giving sun and moon,
Brilliant in the name of Jahāngīr Shah.

110. Round rupees struck at QANDAHĀR with the *dilkhwāh* couplet of Jahāngīr are abundant—for example see P.M.Cat., p. 148. The British Museum has a square specimen of date 1026, 11, which was in the Bleazby Collection.

111-112. *Obv.*

تا ابدار
نگیر
بنام چها شاه
.....

R. 65. Wt. 84.

Rev.

ماه
مهر
بود نورده
سکه

B.M.

نگیر شاه
چها
تا ابدار با ...
ب
ضر کا ...

R. 85. Wt. 174.

و ماه
مهر
بود نورده
سکه

B.M.

A few specimens are known of this new type of KĀBUL currency. Mr. C. J. Brown has given a tentative reading of the couplet in L.M.Cat., p. 24. The couplet is clearly much the same as that on the small piece of Jahāngīrnagar mint described above, and seems to be on the following lines:

سکه بود نورده مهر و ماه
تا آبدار بنام چهانگیر شاه

Let coin be the light-giving sun and moon,
So long as it is brilliant in the name of Jahāngīr Shāh.

113. *Obv.*

۱۰۲۹

جهانگیر
نشار

R. 55. Wt. 43. (Pl. VIII.)

Rev.

لاهور
۱۸
ضر
سنة

B.M.

114. *Obv.*

ن
فشا
نور ۲۰

R. 35. Wt. 9. (Pl. VIII.)

Rev.

لاهور
ضرب

B.M.

114 a.	Obv. ن افشا نور ۱۰۳۳	Rev. لاهور ۱۸ صر
	Wt. 9.	Berlin.

115.	Obv. شاه اکبر شاه نگیر جها ۱۰۳۹	Rev. قبول خیر لاهور ۱۰ ضرب
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R. .5. Wt. 21.

Bibliothèque Nationale, Paris.

These are all the known types of *largesse* money—the *niṣār*, the *nūr afshān* or *nūr fashān*, and the *khair kabūl*—struck at LĀHOR mint. Mr. H. Nelson Wright has a silver Lāhor *niṣār* of Jahāngīr, and so has Major Edouard von Zambaur—see *Numismatische Zeitschrift*, Vienna, 1904, p. 120. The latter specimen resembles 113 and is of date 1029, 14.

116. I illustrate a specimen of the very rare heavy couplet rupee of LĀHOR mint, date 1020, 6, month *Khūrdād*, in the Cabinet of the American Numismatic Society (Pl. VIII). The couplet was published by Mr. C. J. Rodgers at p. x of his Punjab Museum Mughal Catalogue, 1893, see also L.M Cat., p. 26. Mr. Nelson Wright has a specimen.

117. In *N.S.*, v, Mr. Thanawala published an interesting and beautiful rupee of Jahāngīr and Nūr Jahān of LĀHOR mint bearing an entirely new couplet. There is a good specimen of the same year in the Cabinet of the American Numismatic Society which I illustrate (Pl. VIII). It shows that Mr. H. Nelson

Wright's reading of the couplet was quite correct—see *N.S.*, v, p. 127.

فزوده نور جهان روے سکه لاهور
ز نام شاه جهانگیر تا شده پر نور

118. *Obv.*

ابن شاه
اکبر
شاه جهانگیر
شهنشاه
زمان ۱۲

Rev.

بحر و بر
شاه
فتح دکن
سکه زد
بماندو ۱۰۲۶

AR. ۹. *Wt.* 174. (*Pl.* VIII.)

Wh.

The mint is MĀNDŪ, the date 1026, 12, and the couplet is

سکه فتح دکن زد بماندو شاه بحر و بر
شهنشاه زمان شاه جهانگیر ابن شاه اکبر

Struck coin of victory in the Dakkan at Māndū, king of sea and land,
King of kings of the Age, Shāh Jahāngīr son of Shāh Akbar.

This is the first Mughal silver coin found of Māndū mint, and its interest is increased by the reference, unique as far as the legends on existing coins are concerned, to a victory in the Dakkan (Deccan), or the South. I am indebted for the substance of the following note to Professor S. H. Hodivala, Principal of the Baha ud Din College, Junagadh, Kathiawar.

The triumphant reference is to the surrender or restoration of the fort of Aḥmadnagar and other strong places of the Deccan, conquered by Akbar but wrested from the Mughals during the early part of Jahāngīr's reign by the enterprising Malik Ambar. In his account of the events of the eleventh year of his reign the emperor Jahāngīr writes:

"Before the coming of 'Ādil Khān's ambassadors

I had made up my mind that having sent Bābā Khurram on with the vanguard I should myself proceed to the Deccan and carry out the important affair" (Tūzūk, tr. Rogers and Beveridge, i, 336).

Prince Khurram (afterwards Shāh Jahān) left Ajmer on the 18th of Shawwāl, 1025, for "the conquest of the provinces of the Deccan." Jahāngīr himself followed on the 1st of Zilqā'da = 21 Ābān, 1025 = 10th November, 1616 (regnal year 11). We are consequently told that on the 29th of the month Farwardīn of the twelfth year "Saiyad Abdullah Barha, the envoy of my son of good fortune Bābā Khurram, waited on me and presented a letter from that son containing news of a victory over the provinces of the Deccan. All the chiefs laying the head of duty in the noose of obedience had consented to service and humility, and laid before him the keys of the forts and strongholds, especially the fort of Aḥmadnagar. In gratitude for this great favour and beneficence, placing the head of supplication on the throne of that God who requires no return, I opened my lips in thankfulness, and humbling myself ordered them to beat the drums of rejoicing" (*ibid.*, p. 380).

The emperor Jahāngīr was at Māndū when the joyful news arrived, and there can be no doubt that the above rupee was struck in honour of the occasion. His sojourn at Mandū (the alternative form of the name of the town) was also commemorated by the striking of gold coin—P.M.Cat., 918 and N.S., xxxi—but the legend on the mohur does not contain any allusion to the victory. However, my rupee was not the only numismatic memorial of this فتح دکن. Jahāngīr himself mentions another, namely the silver *tanka* commanded to be struck when he was at Cambay in the

same year. He tells us that it bore the following couplet:

بزر این سکه زد شاه جهانگیر ظفرپرتو
پس از فتح دکن آمد چو در گجرات از ماندو

This silver *tanka* still awaits discovery. There can be no doubt that the unique rupee of mint Urdū dar Rāh i Dakkan—L.M.Cat., 1280—was struck in the royal camp during Jahāngīr's journey from Ajmer to Cambay. There is considerable resemblance in style and legend to the coin of Māndū mint just described. It is illustrated on Pl. VIII, 118 A.

Copper.

- | | | |
|------|-----------------|-------------|
| 119. | <i>Obv.</i> | <i>Rev.</i> |
| | ۱۰۲۴ | اجمیر |
| | جهانگیر | ۱۰ |
| | سکه | |
| | Æ. 95. Wt. 627. | Wh. |

This is a full *tanka* or double *dām* of Jahāngīr of AJMER mint, dates 1024, 10. I know of no other specimen. The only other copper coin of Jahāngīr of this weight known to me is Mr. Nelson Wright's double *dām* of Bairāt mint—see N.S., xxv, p. 236.

- | | | |
|------|-----------------------------|-------------|
| 120. | <i>Obv.</i> | <i>Rev.</i> |
| | جهانگیر | اجمیر |
| | ۱۰ | ۱۰۲۴ |
| | فلوس | ضر |
| | Æ. 85. Wt. 314. (Pl. VIII.) | Wh. |

A rare *fulūs* of AJMER mint, dates 1024, 10.

- | | | |
|------|----------------------------|-------------|
| 121. | <i>Obv.</i> | <i>Rev.</i> |
| | شا | ماہ دی الہ |
| | ۱۱ | احمدآباد |
| | جهانگیر | فلوس |
| | ۱۰۲۶ | |
| | Æ. 8. Wt. 319. (Pl. VIII.) | Wh. |

A new type of AḤMADĀBĀD *dām*, date 1026, 11 ; month Dī.

122-123.

<i>Obv.</i>	<i>Rev.</i>
روا نہ	۱۰۲۰
۹	سنہ
سنہ	اودیپور
	ضر
Æ. 75. Wt. 316.	Wh.
جہانگیر	.....
سکہ	اودیپور

Æ. 7. Wt. 313.	Wh.

Two types of ŪDAIPŪR *dām*.

124.	<i>Obv.</i>	<i>Rev.</i>
	جہانگیر	۱۰۲۴
	فلوس	کابل
		ضر
	Æ. 85. Wt. 181.	Wh.

An unpublished copper coin of KĀBUL mint. The specimen is much rubbed but the date seems to be either 1014 or 1024.

125.	<i>Obv.</i>	<i>Rev.</i>
	روا نہ	۱۹
	۱۰۲۱	سنہ
		ضر گوندہ
	Æ. 8. Wt. 317.	B.M.

This *dām* is probably of Gobindpūr mint.

R. B. WHITEHEAD.

MISCELLANEA.

A NEW BRONZE OF SYRACUSE.

(PLATE IV. 10.)

Obv.—Female head r. veiled and wearing stephane, hair in small knot behind. Above, star of eight rays. Border of dots.

Rev.—ΣΥΡΑΚΟΣΙ|ΩΝ. Laureate piloi of Dioskuroi with straps, surmounted by stars of eight rays. Under each pilos a bar or stand. Plain border. Concave field.

Æ ↓ 0.5 in. (12.5 mm.). Wt. 26.5 grs.
(1.72 grm.). In mint state. Dark green patina.

THIS little coin does not appear to have been published hitherto. A poor example is described and illustrated in the Weber catalogue, vol. I, recently issued, under Tyndaris (No. 1761), to which city it was no doubt ascribed upon the evidence of its types, and in the absence of all save the last syllable of the legend.¹

The Weber coin is now in the British Museum collection, and it is interesting to compare the coin now described with that of the Museum, and both with the coin of Tyndaris (B.M.C. 16) having similar types.

There is no other Syracusan issue known which has these types, and their close resemblance to those of Tyndaris, coupled with their isolated occurrence, points to the conclusion that they were struck in circumstances of close association between the two cities. If style alone were to guide our judgement, it would be necessary to fix the date of the issue quite late in the third century B.C., for, though excellent in execution, the design and fabric cannot be matched in any coin of Syracuse struck before the period of the Roman Dominion, after 212 B.C. But valuable as

¹ Before the distribution of the Weber catalogue it was possible to add a note correcting the attribution.

style may prove to be in determination of date, its witness must necessarily be considered in the light of other evidence, and, in the present instance, the very definite indication of a connexion with the city of Tyndaris demands that the history of that city should be examined in the hope of finding there some guidance as to the date and circumstances of the issue.

Tyndaris was on the north coast of Sicily, at a distance of 36 miles west of Messina, and about 104 miles north of Syracuse. It was almost the latest city of purely Hellenic origin to be founded in the island, and Diodorus Siculus² tells us that it owed its existence to the establishment there of a body of Peloponnesian Messenians by Dionysius the elder, tyrant of Syracuse, in 396 B.C. When Timoleon³ landed in the island in 344 on his way to Syracuse, he was welcomed by the Tyndaritan, who declared in his favour. Hiero II, in his operations against the Mamertines in 269, had the support of Tyndaris, and his left was based upon that city, while his right rested upon Tauromenium. During the first Punic war Tyndaris was under the dominion of Carthage, but, after the fall of Panormus in 254, the Carthaginians were expelled, and Tyndaris threw in her lot, wholeheartedly and permanently, with Rome. We thus have a definite *terminus ad quem* in 254 B.C., later than which no connexion between the two cities could be intimate enough, or possess sufficient political importance, to be reflected in community of coin types.

Tyndaris seems to have maintained her political freedom for 142 years—396 to 254—and within that period three occasions stand out, 396, 344, and 269, at which is found such close connexion with Syracuse as would make those more probable for the association of coin types than any other dates. The first and the second of these occasions must be rejected upon the ground of the style of the coin under consideration, and, by this process of exclusion, we are left to postulate the last, 269 B.C., as the date when the use of Tyndaritan types with the legend ΣΥΡΑΚΟΣΙΩΝ was produced by force of political events.

It is, perhaps, not very profitable to speculate upon the nature of the circumstances calling for this issue of coinage with the types of one city and the ethnic of another, and yet the occasion may justify a suggestion. An army operating

² xiv. 78.

³ Diod. Sic. xvi. 69.

with its base in a friendly country would need an abundance of small change beyond the means of one of the less important cities of the island to provide. The silver coins of the time circulated freely in other than their own states, far and near, as the numerous finds in various parts of Sicily bear witness: they had their intrinsic value. The bronze coinage, having merely token value, was in different case, and could be exchanged for articles of value only within restricted limits. In the circumstances of the Syracusan army occupying, or fighting within, the friendly territory of Tyndaris, the bronze coins offered by the visitors must bear types recognizable by their familiarity to the persons to whom they were offered, and they must possess the guarantee of the issuing state for the protection of the issuer and acceptor alike. The use on the foreign coins of the types of one of the coins of their own city would give to the people of Tyndaris the confidence of familiarity; the legend would protect the value of the coins in exchange with their country's guests, and would, at the same time, assure to the issuing state that it should not be called upon to honour more token coinage than it had issued.

A. H. LLOYD.

FIND OF ROMAN DENARII IN DENBIGHSHIRE.

THE coins described below were found on March 19, 1918, in a drain cut to dry plough-land, about a yard below the surface, loose and heavily encrusted; they were mixed with earth and some may have remained behind in the drain. The place of finding is about 125 yards away from and above the house of the finder, and half a mile from Llanarmon Dyffryn Ceiriog, in the extreme south of Denbighshire. 551 coins were extracted from the ground, of which 507 reached the British Museum and are described below. The remainder were sold or given away, and, unfortunately, can no longer be traced.

The find is of a type familiar both in this country and elsewhere. The period before Nero is only represented by legionary denarii of Antony—saved by their base metal from the melting-pot; from Nero on there is a thin stream down to the end of the second century, and then under Septimius Severus the volume grows denser and continues

so, till nearly the end. Minor features of interest in this find are the comparatively large number of coins of Vespasian (21), the dearth of coins of Domitian¹ (only 2 of his own reign) and Nerva (none), the presence of 3 Antoniniani among the denarii. The most curious feature, however, is the great number of coins falling within the reign of Septimius Severus—some 300 in all, if we include the coins of his family struck during his lifetime. After his death the numbers suffer a decided decline and fall away until the close under Alexander Severus. The latest dated coin² (probably the latest coin of the find) is of the year A.D. 226. Under these circumstances it is tempting to see some connexion with the British campaigns of Severus; it is natural to suppose that, owing to the war, an unusually large amount of money poured into Britain at the time, and this find may be taken to furnish definite evidence for the supposition.³

A conspectus of the find and a summary of the coins follow :

M. Antony	12	Albinus	1
Nero	1	Sept. Severus	164
Vespasian	21	Julia Domna	66
Titus	2	Caracalla	81 (2 Antoniniani)
Domitian	3	Plautilla	2
Trajan	4	Geta	27
Hadrian	2	Macrinus	6
Antoninus Pius	14	Diadumenian	1
Faustina I	7	Elagabalus	31 (1 Antoninianus)
M. Aurelius	9	Julia Maesa	8
Faustina II	3	Julia Soaemias	3
Commodus	27	Alexander Severus	9
Pertinax	1	Julia Mamaea	2
		Total	<u>507</u>

¹ Domitian does not appear to have made any considerable increase in the weight of his denarius, to correspond to the increase in his aureus; but some trial weighings suggest that he did raise the weight appreciably.

² Unfortunately the reading of the *rev.* is not quite certain: it is probably of A.D. 226, possibly of A.D. 227.

³ For two finds of similar character, see the *Victoria County History, Somerset*, i, p. 364 (Long Ashton), and *Num. Chron.*, 1898, pp. 126 ff. (East of England).

Antony, B.C. 33-31. The East. C. 27 ff.: 12 legionary coins ("Leg. VI", "Leg. VIII", "Leg. XII", "Leg. XIX", and uncertain).

Nero, A.D. 67-8. Rome. C. 320.

Vespasian, A.D. 69-79. Rome. C. 43 (2), 54, 84, 122, 127, 164, 226, 362, 368, 432 (but **CEN.** on *obv.*), 550 (but **TR. POT. X** on *obv.*), 563, 574, 618 (but *rev.* Victory standing r., crowning standard), and six specimens of a common type omitted by Cohen, *obv.* **IMP. CAESAR VESPASIANVS AVG.** Head laureate r., *rev.* **COS. ITER. TR. POT.** Pax seated l., holding branch and caduceus.

Titus (under Vespasian), A.D. 73-9. Rome. C. 17 and one uncertain.

Domitian (under Vespasian), A.D. 73. Rome. C. 664.

(Emperor) A.D. 81-96. Rome. C. 283, 571 (but in silver).

Trajan, A.D. 98-117. Rome. C. 68, 75 (but bust draped laureate r.), 109, 280.

Hadrian, A.D. 117-38. Rome. C. 335, 1484 (but head laureate r.).

Antoninus Pius, A.D. 138-61. Rome. C. 199 (but no altar on *rev.*), 226, 290, 291, 344, 451, 582, 861, 979, 983, 1016, 1039 (2).

Antoninus Pius and Marcus Aurelius, A.D. 142-4. Rome. C. 14.

Faustina I, after A.D. 141. Rome. C. 11, 32 (2), 73, 116 (2), 124.

Marcus Aurelius (under Antoninus Pius), A.D. 156-9. Rome. C. 702, 721, 740.

(Emperor) A.D. 161-80. Rome. C. 31, 146, 469, 935, 968.

(After death.) c. A.D. 180. Rome. C. 83.

Faustina II, c. A.D. 161-75. Rome. C. 31, 99, 147.

Commodus (under Marcus Aurelius), A.D. 175-80. C. 77, 762, 790.

(Emperor) A.D. 180-92. Rome. C. 24, 34, 45 (2), 127, 195, 282, 288, 327, 340, 350, 492, 544, 568 (3), 571 (3), 646, 703 (2), 838, 879 (but **ANTON.** on *obv.*).

Pertinax, A.D. 192. Rome. C. 20.

Albinus, A.D. 193-5. Rome. C. 48.

Septimius Severus, A.D. 193-211. Rome. C. 1, 6, 21 (3), 37 (9), 42, 48 (4), 50 (5), 51 (3), 134 (completing *rev.* legend),

- 135 (3), 188 (2), 203, 205 (2), 212 (3), 222, 290 (but head laureate r.), 298, 302, 304, 315, 349, 357 (7), 370 (3), 373, 380, 381, 390 (4), 391, 396 (4), 404 (2), 417, 419 (5), 423 (3), 433, 436, 437 (4), 442 (2), 444 (4), 449 (3), 469 (2), 475 (2), 489, 493, 501, 514, 525, 529, 539, 543, 576, 578 (4), 580 (4), 586, 592 (2), 599 (3), 606, 641 (2), 647 (6), 694 (5), 719 (4), 744, 761 (2), 777 (3), 791.
- A. D. 193. Antioch (?). C. 738.
- A. D. 193 ff. Antioch. C. 40, 58, 78, 96 (2), 98, 345 (2), 444 (2), 455, 592, 695, 719 (3), 741.
- Julia Domna*, A. D. 193-217. Rome. C. 14, 27 (4), 32 (2), 47 (3), 55 (2), 72 (5), 82 (2), 97 (9), 101, 123, 137 (3), 150 (2), 156 (7), 168, 174 (2), 185, 194, 198 (3), 205, 212, 221, 226, 230, 246 (5).
- A. D. 193-201. Antioch. C. 14, 72, 101, 169, 194, 246.
- Caracalla* (under Septimius Severus), A. D. 196-211. Rome. C. 8, 53 (4), 74 (but no cuirass on *obv.*), 82 (2), 95 (4), 97, 122, 143, 154 (2), 177 (3), 178, 413 (2), 422 (2), 424 (5), 440, 447 (3), 464, 465 (2), 505 (2), 562 (5), 587, 590, 594, 658 (2), 667, 686, 688.
- A. D. 198. Antioch. C. 159.
- (Emperor) A. D. 211-18. C. 84, 150, 152, 165 (4), 167, 196, 205 (2), 206, 220, 239 (2), 282 (2), 296, 306, 315, 337, 348, 378, 508, 529, 606, 608 (2).
- Plautilla*, A. D. 202-5. Rome. C. 1, 25.
- Geta* (under Septimius Severus), A. D. 198-211. Rome. C. 49, 68, 90 (2), 104 (2), 157 (9), 170 (2), 183 (5), 188 (2), 198, 197, 206.
- Macrinus*, A. D. 117-18. Rome. C. 26, 55, 79, 108, 116 (2).
- Diadumenian*, A. D. 117-18. Rome. C. 3.
- Elagabalus*, A. D. 218-22. Rome. C. 1, 28 (2), 32, 38, 60, 61, 70, 92 (3), 120, 134, 144, 184 (2), 189, 196, 246, 256, 261 (2), 282 (2), 291.
- Antioch. C. 15, 58, 102, 246, 261, 306.
- Julia Maesa*, A. D. 218-22. Rome. C. 8 (2), 36 (4), 45 (2).
- Julia Soaemias*, A. D. 218-22. Rome. C. 8 (2), 14.
- Alexander Severus*, c. A. D. 222-6. Rome. C. 70, 188, 198, 204, 206, 229, 231, 236, 289.
- Julia Mamaea*, c. A. D. 222-6. Rome. C. 35, 72.

A SMALL HOARD OF BRITISH OR GAULISH COINS FOUND
NEAR ROCHESTER.

On 26th February, 1912, a hollow flint sponge forming a purse which contained eleven British gold coins was found in the grounds of "Hillyfield", Higham, near Rochester. The coins are all of the same type, Evans, Plate B 7. The drawing of the reverse is not quite correct on the plate, the horse's tail is a crescent as on No. 8, there is not a tail hanging down, but an eye ornament behind the rump similar to that in front of the head; on none of the coins is the exergue visible, the edge of the flan in each case cuts off a portion of the horse's legs.

Appended are the weights and specific gravities (approximate) of the coins and a note of identities of die, the capital letters representing obverse and the small letters reverse dies:—

1.	A × a	wt. 102.4 grs.	sp. g. 15.32
2.	A × a	101.9	15.25
3.	A × b	101.1	15.27
4.	B × b	101.2	15.29
5.	B × b	98.6	15.07
6.	B × c	100.6	15.17
7.	C × c	98.3	15.05
8.	D × d	102.1	15.01
9.	D × d	101.6	15.24
10.	E × e	100.1	14.94
11.	F × f	101.9	14.80

This type is one that is found both in France and in England, and is assigned by M. Blanchet to the Atrabates; it seems to be, in conjunction with the kindred type, with plain obverse, of the Morini, the parent of the ancient British coinage. Whether any of the coins of this particular type were struck in this country is doubtful; if the weight of the coin is any criterion, they were probably struck in Gaul. But B 4 and B 6, which have a very similar obverse are almost certainly British.

G. C. B.

A LEICESTER PENNY OF WILLIAM I.

A PENNY of William I, of the seventh type of the reign (*Hawkins*, 239; *B.M.C.*, VII) has been presented to the British Museum by Dr. W. Williams of Dyffryn. It reads +FRED[]GEST ON LHR. The uncertain letter or letters between Ð and G in the moneyer's name might be H or F! or, more probably, P! This name was previously known on one coin only, so far as I am aware, *B.M.C.*, Vol. II, p. 16, No. 80; this was a coin of type II reading +FRIDEGIST ON LEI which was attributed to Chester. The new coin proves that both should be placed to the Leicester mint. The name, Frithugist, is quoted by Searle from the Chronicle and Charters; I have not met with it on any other coins.

G. C. B.

REVIEWS.

Catalogue of the Greek Coins of Arabia, Mesopotamia, and Persia (Nabataea, Arabia Provincia, S. Arabia, Mesopotamia, Babylonia, Assyria, Persia, Alexandrine Empire of the East, Persis, Elymais, Characene). By G. F. HILL, F.B.A. Pp. ccxx+360, Map, 55 plates. London, 1922. £3 10s.

THIS eagerly awaited volume, the twenty-eighth of the series, more than meets our expectations. To an even greater extent than in the preceding publications of the Museum does the introductory text outweigh in value, if that were possible, the actual body of the catalogue itself. In fact, the present volume goes well beyond the usual meaning of the term Catalogue—a potential mine in which future scholars may dig to their advantage. Here we find the material already fully exploited by Mr. Hill, to the great assistance of all students in this particular field and especially to those working in cognate fields. Mr. Hill has indeed succeeded in giving us a complete and lucid handbook covering the many diverse series embraced by the new Catalogue. This will be appreciated by all. Hitherto, the special studies devoted to these various coinages have generally appeared in foreign periodicals or in special brochures not always easily accessible to the average student or collector. They have now all been brought together in one convenient volume.

The coinages treated cover an extraordinarily wide field. While previous volumes of the British Museum Catalogue have dealt with the issues of a single kingdom or a more restricted province, this embraces the coinages of many kingdoms and districts stretching from the southern tip of Arabia to the northern portions of Persia. It is obviously impossible, in the space at my command, to review in an adequate manner the very diverse materials so splendidly presented by Mr. Hill. The reader is therefore asked to be indulgent with the reviewer if he appears to slight some important portion in order that he may concentrate more fully on others.

The first section of the introduction and catalogue treats the coinages of the Nabataean Kings from Aretas III

(c. 87-62 B.C.) to Rabbel II (c. A.D. 71-106), the last King of the line. While the study is largely based upon R. Dussaud's well-known work, Mr. Hill has been able to correct some minor mistakes or misconceptions of the French scholar, and the British Museum collection adds some valuable material to that already published. As regards the unique didrachm of Malichus I (Pl. i. 5), Mr. Hill is obviously quite justified in discarding Dussaud's improbable suggestions concerning the true interpretation of the "mysterious" letters I K C appearing in the reverse field of the coin. On the other hand, Mr. Hill does not simplify the interpretation of these three signs. Instead of reading the I as either 10 or 1 (both most unusual in connexion with the following K = 20) and the C as a blundered E (as if meant for ετους), it would seem far more probable to see in I merely an attempt at the usual date sign L. The blunder (I for L) is but slight and might well have happened to a native engraver. Especially might this be the case as on the contemporary Ptolemaic tetradrachms (of both Auletes and Cleopatra VII), which seem to have served as models for the Nabataean didrachm, almost invariably the sign L has degenerated into a mere I. With this minor correction the date could be read as 26. This is more acceptable, for it is simpler than either of the readings "30" or "21", which in both cases presuppose an almost impossible mixture of Greek and Semitic elements. The year 26 falls well within the probable reign of Malichus, as Mr. Hill has successfully vindicated for this King (p. xiv) another coin bearing the date 28. The arguments put forward by Mr. Hill for discarding the new Obodas (to be inserted between Obodas II and Malichus as suggested by Dussaud) seem amply justified. The section closes with an interesting discussion of the silver weight standards adopted by the Nabataean Kings.

The second section embraces the coinages of imperial times struck in various cities of the Provincia Arabia. It will supersede the inadequate lists available for the majority of these cities, while it will further supplement, and in many instances correct, the fairly complete lists (by Morey and Kubitschek) of the interesting coinages of Bostra. To these issues of Bostra, however, should have been added the small bronze coins of Faustina I erroneously assigned (B.M.C., *Palestine*, p. 169, Nos. 1, 2) to Nicopolis-Emmaus in Judaea. These coins are companion pieces to the larger denominations catalogued in the present volume, p. 17, Nos. 6-9. They are absolutely identical with

these latter in style and fabric, and at the same time utterly dissimilar to the issues of Nicopolis to which they have hitherto been given. In the reviewer's collection are a number of these little pieces, all from beyond the Jordan, clearly giving the inscription NT—BO, that is the N(éas) T(παρις) BO(στρος) of the larger coins. These letters have hitherto been translated into the impossible date <T.BO. Mr. Hill is probably right in rejecting the doubtful theory that the curious object presented on Nos. 48-49 is a wine press, and rallies to Dussaud's far more reasonable view that it represents an altar(?) adorned with three baetyls sacred to Dusares. Mr. Hill is also certainly right in agreeing with de Saulcy that no coins attributable to the city of Moca really exist. De Saulcy had successfully disposed of an autonomous coin and a coin of Sept. Severus. Concerning the third piece assigned to Moca, Mr. Hill says, p. xxxvii, "The coin of Antoninus Pius has not been verified." In the reviewer's cabinet there exists a specimen of this particular variety which had been too hastily assigned by its former owner, Dr. Rouvier, on Vaillant's authority, to Moca. A close inspection now clearly reveals the fact that the coin legend actually reads ΔΙΟΚΑΙ-ΙΕΡΑ-ΑΥ-ΑΥΤΟ, and the piece is really an issue of Diocaesarea-Sepphoris (B.M.C., *Palestine*, p. 3, Nos. 21-25, Pl. i. 6). The slightly corroded ΔΙΟΚΑΙ might easily be mistaken for the letters MOKA.¹ Moca, therefore, certainly falls out of the list of cities in the Provincia Arabia which struck coins. The coin of Philippopolis (Pl. vi, No. 14) appears to be either a modern cast, or, at least, an old coin shamefully retouched. This would account for the exceptional absence of the letters SC found on all genuine specimens. Mr. Hill is undoubtedly justified in rejecting (p. xxix) Dussaud's identification of Zeus Ammon with the Arabian god Dusares. An unpublished coin in the reviewer's cabinet gives a representation of Dusares as a young beardless divinity. Curiously enough, however, he wears armour, as does Zeus Ammon on other coins of Bostra.

As might perhaps be expected from the unusually complete collection of South Arabian coins possessed by the British Museum, the chapter on this series will prove most welcome and useful, thanks to Mr. Hill's masterly handling of so difficult a subject. He is able to bring together into

¹ See also Kubitschek in *Num. Zeit.* 55 (1922), p. 160, where the same identification is made.

an understandable whole the previous works of Mordtmann, Schlumberger, Kubitschek, and others. The various theories proposed have been subjected to a critical analysis, and the more doubtful ones rejected or modified. He brings out the point that the earliest of the South Arabian coins should be assigned to the Sabaeans rather than to the Himyarites as hitherto supposed. Possibly Mr. Hill is a little hypercritical in his reluctance, at least until more definite evidence to the contrary appears, to accept the theory advanced that the letters λ , ρ , τ , ψ appearing each on one of the denominations of this series might have been intended to differentiate between them. Certainly it is odd that each of the early denominations should have been so consistently characterized by its own special letter. That two of these letters should appear on South Arabian tetradrachms would not militate so seriously against the theory as Mr. Hill seems to think, for in each case the letter has been *scratched* or *punched* into the larger coin and is therefore probably not official, while for all of the smaller denominations the letter is actually cut into the die and so *must* be of an official nature. On the other hand, he is certainly justified in rejecting Schlumberger's theory that these letters represent the initials of mint-names. Mr. Hill follows Head rather than Schlumberger in the classification of the so-called San'a type, though he follows the latter in placing the introduction of this class some time in the second century B.C. (i.e. *circa* 115 B.C.). The end of the series he would put in "the last quarter of the century and the first half of the first Christian century". This would seem to make the contents of the San'a hoard cover nearly a century and a half, a very long stretch of time for the coins of this class to retain so successfully their weight, as well as their peculiarities of fabric and style. In this respect, to separate the first issues from the last by a period of over a hundred years seems rather too long. Furthermore, all types were represented in the San'a hoard, and with the exception of only a few pieces of the very earliest variety, there seems to have been but little difference in the amount of wear shown by the earlier as opposed to the later types.

Thanks to a recent find (or finds) our material for a study of the so-called "Bucranium" class and the succeeding issues of the series with two heads bearing the name of 'Amdan Bayyin (Pl. xi, Nos. 6-11) have been greatly increased. These finds prove that the coins in question certainly circulated side by side in Ancient Arabia, and that therefore their issues must have been more or less con-

temporaneous. The coinages of Karib'il Yehun'im Wattar and 'Amdan Yehuqbid must have followed them or have been struck in another province as neither were present in the new find. A certain portion of the "two-head class" has been very convincingly assigned by Mr. Hill to the Katabanians with a mint at Harb. The chapter contains a most interesting discussion of the weight standards used for the South Arabian coins.

We will not delay over the rather uninteresting Roman issues for Mesopotamia which are both well represented in the B.M. collection and fully described and discussed by Mr. Hill. He shows that the cities of Maiozomalcha, Nicephorium, and Zaittha, to which coins have been assigned by earlier writers, should be expunged from the list of towns possessing mints at this time.

One of the most interesting as well as valuable portions of the introduction to the present volume is that which deals with the familiar royal issues of the Achaemenid sovereigns. This large and difficult coinage Mr. Hill divides into four main groups, according to the attitude and details of the Royal Archer. Basing his studies upon such valuable data as are offered by various known hoards of Persian darics and sigli, rather than upon the highly controversial details of the royal "portrait", the author has been able to establish some fairly definite facts. He shows, for instance, that the king with sceptre and the king with dagger types were used simultaneously through a long period of years. He also makes the very acceptable suggestion that two of his groups (half-length figure of the king, and king drawing bow) are probably of the fourth century and struck in eastern mints. Mr. Hill has refrained from discussing at any length the subject of the probable mints of these Persian darics and sigli. Available material for such a study is still largely lacking. He does, however, boldly attack the question of the punch-marks so frequently found on the earlier issues. He reaches the conclusion that these punch-marks seem to have been applied to the coins in the lands bordering on the Mediterranean. The facts undoubtedly sustain Mr. Hill's contentions, and, once for all it may be hoped, do away with the old theory that many of these punch-marks were applied to the coins in India. This latter theory, based upon a certain superficial resemblance which some of the punch-marks bear to Brahmi and Karoshthi letters or to certain punch-marks found on very early Indian coins of native manufacture, was propounded many years ago and

was followed by the present reviewer. Latterly, however, he had come to look upon it with deep suspicion and is well satisfied that the *coup de grâce* has now been dealt it with such finality by Mr. Hill.

In succession to the Achaemenid series have been placed the abundant issues of the double daric and their accompanying "lion staters". Mr. Hill follows Imhoof-Blumer in assigning them generally to Babylon and Seleucia on the Tigris, though in a note (p. cxli, n. 1) he admits the possibility of there having been other mints. Further intensive study of the series as a whole, as well as the accompanying Alexandrine series, will undoubtedly show this to be the case. Certain it is that the distaters with the Alexander head and Nike types (Pl. xxiii. 1) and the lion stater (Pl. xxii. 10) and accompanying bronze coins were once struck in Persia. Mr. Hill wisely refrains from following his predecessors in attempting to assign certain groups of these double darics and lion staters to individual rulers.

In the chapter entitled Northern Persia, Mr. Hill has done us a very real service in separating the wheat from the chaff, and especially in proving that the wheat is really what it purports to be. The coins in question have latterly either been condemned or at least viewed with suspicion by most students. It is a relief to have the question so fundamentally dealt with and the majority of these curious and interesting coins so clearly proven genuine after all.

The final three chapters deal with the difficult issues of the provinces of Persis, Elymais, and Characene. While in this case Mr. Hill's work is largely based on the labours of his predecessors, such as Col. Allotte de la Fuye, Mordtmann, and Babelon, he nevertheless in numerous instances makes distinct and important contributions to our sum of knowledge. Unfortunately, the limits of the present review make it impossible to treat adequately the many important questions brought up by Mr. Hill's study of these three series.

The technical presentation of the volume is above reproach. As usual with the British Museum Catalogues, it is well supplied with useful indices of cities, types, symbols, countermarks, rulers, Greek, Semitic, and Latin inscriptions as found on the coins, and, finally, a valuable table of eras. The fifty-five plates with which the volume is provided are generally excellent. Seven of these plates contain important specimens not in the British Museum. The map, accompanying the introduction, while not mounted on linen or so elaborate as those to which we have become accustomed in

preceding volumes, is none-the-less most useful. Throughout the body of the Catalogue, the die positions of each coin are carefully noted, and the placing side by side of weights in both grains and grammes will prove very helpful. This obviates the tedious necessity for those accustomed to thinking in terms of grammes of always referring back to the table of weights. To sum up, no less praise can be given than to state that the present volume stands unequalled among all the splendid publications of the British Museum.

EDWARD T. NEWELL.

Jacopo da Trezzo et la Construction de l'Escorial. Essai sur les Arts à la Cour de Philippe II, 1519-1589. Par JEAN BABELON. (Bibliothèque de l'École des Hautes Études Hispaniques, Fasc. III.) Pp. 347; XII Pl. 10 x 6 in. Bordeaux: Feret; Paris: Boccard, &c.

DR. BABELON is warmly to be thanked for this monograph, which is based on a very careful study of the archives and written with sober appreciation of the merits of his hero. We can imagine how some writers would have treated such a subject; how Trezzo would have been indiscriminately praised as the greatest of medallists and gem engravers. M. Babelon's judgement is more balanced. To tell the truth, if Trezzo's two medals of Philip II and Mary Tudor, both masterly portraits, are set aside, his performance as medallist is rather dull. Of his achievement as a gem engraver it is difficult to judge, owing to uncertainty of attribution. Of his work in the Escorial I do not presume to speak, not having seen it; but it does not seem to have excited the enthusiasm of our author. The interest of the book lies rather in the man than in the artist. M. Babelon makes it clear that though Juan Bautista de Toledo may have begun and Juan de Herrera may have finished the royal monastery, Trezzo was throughout the king's technical and artistic adviser in everything that concerned the decorative features of the *capilla mayor*, the tabernacle and the mausolea of Philip II and Charles V. It is in the details of the organization, of the management of the works, of the procuring of the hard stones from the quarries and the perfecting of machinery for cutting them, of the relations of Trezzo with his fellow sculptors, such as Pompeo Leoni, on the one

hand, and with Philip on the other, that M. Babelon has found his real subject. This is not to say that he has neglected the criticism of the extant works of art from Trezzo's hand. His appreciation of the medals will be generally admitted to be very fair.

It is not possible to do more in this place than indicate a few points of interest to numismatists. But before doing so, if it be not impertinent for a foreigner to criticize an author's use of his own language, I venture to protest against the use of the word *graver* in connexion with Trezzo's medals, which were all cast. It gives a quite wrong idea of the technique. On p. 200 M. Babelon actually speaks of the medal of Philip II as "struck". This in passing. M. Babelon, I am glad to see, finds no reason for rejecting Morigia's statement that Trezzo actually visited England at the time of Philip's marriage to Mary, so that he modelled the medal of the latter from the life. The interesting suggestion is made that the type of the English coins of Philip and Mary, with confronted busts—an arrangement quite new in this country but familiar to Philip's subjects from the coins of Ferdinand and Isabella—was due to the influence of Trezzo, if not actually designed by him. The portraits of king and queen resemble those on his medals, though the latter bear the date 1555, a year later than the first coins. M. Babelon accepts the attribution to Trezzo of the medal of Anthony Brown, only known by the unique but deplorable specimen in the British Museum. We must, I think, wait until a better specimen is found before deciding whether the medal is the work of Trezzo or—as seems possible—of a Flemish hand. Justus Fyt, of whom there is a unique medal (though not by Trezzo) in the Rosenheim Collection, is identified as one of Philip's jewellers. (The attribution to Steven van Herwyck, by the way, is quite impossible: see *Burlington Magazine*, vol. XXXIII, p. 59.) On p. 219 the little medal of the Empress Mary of Austria with two M's interlaced on the reverse is rightly refused to Trezzo, without, however, any attempt at attribution; but there can be little doubt that it is by Antonio Abondio (see *Archiv.* i, pl. XI, no. 3). The famous medal of Gianello della Torre is claimed for Trezzo; on the whole the evidence of style seems to favour this view. Among the cameos of Philip II which require to be examined when a definitive attempt is made to delimit Trezzo's *œuvre* in this medium is Mr. Oppenheimer's sardonyx from the Bessborough and Story-Maskelyne

Collections (Burlington Fine Arts Club, *Exhibition of Italian Plastic Art*, 1913, Pl. LXIX, No. 10). It does at any rate certainly represent Philip, which seems a little doubtful of Nos. 6 and 7, on M. Babelon's Pl. VII.

I note one or two slips of the pen or the printer. p. 64: note, *Giovanni dal Comino* should be *G. dal Cavino* (at least so it is in the edition of Vico at my hand). p. 76: Fabriczy never said that Abondio's medal of Trezzo was "struck". It is of course cast. p. 200: 1556 for the date of the marriage is a misprint for 1554. p. 229: Pompeo Leoni is an obvious misprint for Leone Leoni.

G. F. H.

Catalogue des Monnaies Françaises de la Bibliothèque Nationale : Les Monnaies Capétiennes ou Royales Françaises, 1^{re} section (de Hugues Capet à la réforme de saint Louis). By A. Dieudonné (Leroux, 1923), pp. xciv + 72 + 15 (Index, &c.) Plates A to K (line drawings) and I to VIII (collotype).

It is seventeen years since the publication by Monsieur Prou of the Carolingian section of the Catalogue of French Coins in the Bibliothèque Nationale. In the next volume, which is now published, Monsieur Dieudonné has catalogued the Capetian series down to the reforms of St. Louis (1266). He is fortunate in being able to include some very important deniers of Hugues Capet found near Provins, which were acquired last year.

The first period of this volume comprises the "local" deniers, that is to say, the coinage which continues to be struck under feudal authority as in Carolingian times. Many mints, it is true, are in the king's domain, and strike in the king's name, and yield their profits directly to the king, but he controls them not by sovereign right, but by the personal, or seignoral, right which he has acquired by succession, conquest, or compromise. The remaining mints are still for the most part in the hands of ecclesiastical lords, and a few in the hands of secular. It is interesting to find a case of the burgesses of a city, Compiègne, asserting their right to prevent the king, Louis VI, debasing the coinage below 50 per cent. fine. The author has therefore done wisely to classify the coins of this period primarily under the mints and not under kings; this is the true

perspective of the coinage. He has reserved to the end of this period the deniers parisis of Louis VII, which bear as reverse type the word "Franco" in two lines, the type which becomes the sole survivor and ultimately extends throughout the kingdom.

The origin and classification of the various types of early Capetian deniers are well described under the several mints. In some cases one might wish for more detailed explanation of the evidence; the suggestion, for example, that the two types at Paris, "Rex" and "AΩ", were struck for the use of eastern and western trade, seems at first sight difficult in operation, and requires more evidence than the eastern and western origin of the types; one would like information of the bearing on this question of the provenance of the coins. The brevity of the discussion of controversial subjects is, however, a good fault, if a fault at all in a work of this nature; the excellent bibliography at the head of each mint gives the student the guidance he requires.

The second period deals with the deniers tournois and parisis down to the reforms of Saint Louis (1266); here the subject is more straightforward, and less fruitful of the problems and controversial matter which delight the student.

The volume is throughout an admirable example of the painstaking work and well-balanced judgement which we expect from Monsieur Dieudonné. The volume is divided, as all such catalogues should be, into two parts; the former, the introductory division, is complete in itself; the coins are sufficiently fully described in each section, together with a full bibliography and a discussion of the important historical and numismatic features; there is a brief chapter appended dealing with the form, weight, and alloy of the coins, the types and inscriptions, and epigraphy. The brevity of this important introductory matter is the one fault we have to find with it, and the high cost of printing may be a contributory cause; but perhaps somewhat better proportion might have been obtained by cutting down the descriptions of the coins in each section of the introduction (most of this matter is obtainable by reference to the catalogue itself), and thus devoting more space to descriptive introduction. The epigraphical evidence is well used (and admirably illustrated), but one is left rather in the dark about the extent of its value in the classification of coins of this period. Would not a description of the finds of coins also be valuable?

In the matter of illustration the author has introduced

an innovation which is extremely helpful. The division of the book into introduction and catalogue is balanced by a similar division of the plates. The first eight plates, lettered A to H, have line drawings of coins in the Bibliothèque and elsewhere, with sufficient underlines to make identification simple and quick. Plates J and K are epigraphical tables. The photographs of the catalogued coins are on the collotype plates numbered I to VIII.

Everybody who has had contact with these early French coins will realize how difficult it is to make satisfactory use, for general study, of coin-photographs. Even when the coins are well preserved, the form of lettering makes the reading of the inscriptions difficult. The outline drawings are just what is required to make the plates an adequate illustration of the text, and the one objection to this method of illustrating coins is removed by the addition of the photographic plates of catalogued coins.

The two plates of alphabets are also excellent. The best method of reproducing coin inscriptions is a problem that is always with us; M. Dieudonné meets the difficulty by supplementing a conventional fount with references to drawings.

The Index, which includes inscriptions with general matter, might perhaps be rather fuller. A recollection of one or two interesting references to debasement causes surprise at neither *affaiblissement* nor *titre* appearing.

G. C. BROOKE.

VIII.

THE EARLY DIPLOMACY OF PHILIP II OF MACEDON ILLUSTRATED BY HIS COINS.

EARLY in 359 when Philip became regent in Macedonia, the machinery of government was in need of a thorough overhauling, and the kingdom itself on the point of disintegration. If Philip had been an ordinary ruler, he might have been content with the defence of throne and frontiers against external foes; but, adept though he was in the use of treacherous diplomacy, propaganda, bribery, and all that goes with a policy of "blood and iron", his training in the school of Epaminondas had taught him not to neglect less spectacular means of re-establishing national power and prosperity. Philip had learned that there was more in government than drilling armies and winning victories.

Knowing how economic factors determine both the strength of a government at home and its influence abroad, modern statesmen have become expert in the manipulation of foreign loans, reciprocal tariffs, and commercial concessions. That Philip was not unversed in the use of these modern weapons and fully understood the importance of sound finance and stable currency can best be illustrated by a discussion of his monetary reforms, of the events and conditions that made them expedient, and of the plans of Philip that the reforms were intended to further.

Like Philip's reorganization of the army, his gold and silver currency served a double purpose. It was a symbol of the new Macedonian unity and an instrument for securing this unity. Being well minted and well suited for the development of Macedonian commerce and trade, it resulted in a rapid improvement in the economic position of the country.¹ Moreover, the excellence of the new coinage helped to spread far beyond the frontiers the commercial connexions of the reinvigorated northern monarchy. The kingdom became more and more self-sufficing, and it was soon in a position to free itself from the economic preponderance of Athens on the Macedonian coast.

Two alternative monetary policies presented themselves to Philip. He could either retain for his coinage the so-called Persian standard used by his immediate predecessors,² attempting to force it upon adjacent states by the weight of his authority, the purity of his coins, and the abundance of his issues, as Athens had made her standard supreme in the Aegean, or he could adopt a system that would have an attraction

¹ Kaerst, *Geschichte des Hellenistischen Zeitalters*, i. 153.

² The weight of the Macedonian stater was about 160 grains. Head, *Hist. Num.*, 222. An almost identical form of the Persian standard was used contemporaneously at Maronea and Abdera, two important commercial cities in the direct line of the later Macedonian advance eastward. *Ibid.*, 250, 255; cf. Münzer und Strack, *Ant. Münzen Nord-Griechenlands*, ii, Thrakien, p. 86. The Persian standard was also easily related to other standards prevalent on the coasts of Thrace. For example, four obols of a Persian drachm weighing 84 grs. were the equivalent of one Phoenician drachm of 56 grs., Gardner, *History of Ancient Coinage*, 289. But to enable Macedonian coins to exchange at this rate, it would have been necessary to increase their weight about five per cent. Thus Philip needed to alter the weight of his coinage even though he retained the Persian standard.

for his nearest neighbours and the merchants who were active in Macedonian trade.

Since the first of these courses had the apparent advantage of laying emphasis upon the economic unity and independence of the country, it might well have been adopted by a king who considered coinage merely as a domestic matter. To such a king it would have seemed unnecessary to conform to neighbouring standards, for statesmen of that type do not usually understand how much the development of a country's resources and even the establishment of national self-sufficiency depend upon cordial relations and close contact with the outside world.³

But the astute Philip with his wider vision must have realized that the first requisites for a self-contained Macedonia were sea-coast, harbours, and a merchant class whose interests were Macedonian and not foreign. Lacking these things either he could not afford to go his own way without regard to the coin standards used by his neighbours, or he must lay far-reaching plans to obtain, by force and fraud if necessary, the things he considered essential to a well-rounded economic development of Macedonia.

I shall try to show that at first Philip's plans were not far-reaching, that he was content to let others control the trade of Macedonia, not even dreaming

³ Perhaps Archelaos, who changed from the Phoenician standard used by most of his neighbours to the Persian (Gardner, *Anc. Coinage*, 322 f.), was inspired by a narrowly national desire to make his country commercially independent. If so, he failed conspicuously, for his successor, Amyntas, made large commercial concessions to the Chalcidians, and Philip went back to the Phoenician standard. See West, *History of the Chalcidic League*, 171 f.; Dittenberger, *Sylloge*³, 135.

that he would ever be in a position to impose his will and monetary system upon the Greek cities of the north. It will then be apparent that Philip's change of standards was designed to facilitate trade with the merchants most nearly Macedonian in their interests, merchants whose support might prove valuable to him in his coming contest with Athens. In other words, his initial aims, as illustrated by his currency reforms, were much more modest than we might expect from one whose later career brought vastly more ambitious schemes to a successful issue.

In the first place, the standard Philip chose is significant, for it points to the limits of his horizon, and makes it possible for us to ascertain the nature of Philip's policies as they took form in the early years of his reign. There were three standards from which to select, the Attic, the Rhodian, and the Phoenician.⁴ Of these Philip chose the Phoenician, rejecting both the Attic, which was used by the traders who controlled the Macedonian harbours of Methone and Pydna, and the Rhodian, which had great vogue at that time in the Aegean, and was used by Aenos and Thasos on the Thracian coast.⁵

It is easy to see why Philip refused to follow the lead of Athens, for he could have gained little by the adoption of the Attic standard. There was a conflict of interests between him and Athens, and the

⁴ As the terminology of authors varies, I have, more or less arbitrarily, used the term Phoenician to designate a standard of about 224 grs., called by Professor Gardner "Abderite". The heavier standard, sometimes called Rhodian, sometimes Chian, ranges from a minimum of about 230 grs. to the more usual norm of 240 grs.

⁵ Head, *Hist. Num.*², 247, 265.

use of her imperial standard would have been equivalent to renunciation of his plans for Macedonian rehabilitation and to recognition of Athenian commercial supremacy.

But no such considerations need have prevented him from adopting the popular Rhodian standard, and Professor Gardner in his *History of Ancient Coinage* says that Philip would have used it for silver, except that a somewhat lighter weight was more suited to his plan of making gold and silver better correspond together.⁶ This would be an attractive explanation of Philip's motives if attempts to explain changes of standard by means of a hypothetical bimetallicism had not usually failed to stand the test of scientific examination.⁷ But as the evidence for Philip's adoption of a bimetallic standard is at first view more convincing than usual, and has been accepted by most numismatists as at least probable, although historians disagree as to the ratio then existing between gold and silver,⁸ it will be necessary

⁶ Gardner, *Anc. Coinage*, 424. Beloch, *Gr. Gesch.*¹, ii. 354, thinks that Philip did adopt a light form of the Rhodian standard. Cf. Head, *Hist. Num.*², 222 f.: "In order to preserve the customary Greek (though not Asiatic) habit of exchanging 1 gold stater against 24 silver drachms, while at the same time taking account of the sudden fall in the silver value of gold, he now issued, side by side with his gold stater, silver drachms of *circa* 56-25 grs."

⁷ For a discussion of the weakness of the bimetallic hypothesis, see Gardner, *Anc. Coinage*, 52-54, 278. As he proves, bimetallicism was almost unknown in Greece, although Persia had a bimetallic currency, and Sicily likewise tried it for a time at the end of the fifth century. *Ibid.*, 405-7, 411 ff., 419. Athens in 407-6, and again in 394, issued gold coins, which being of the same weight as her silver coins gave her a convenient bimetallic currency, if the ratio between the two metals was 12:1, *ibid.*, 290 ff.

⁸ Gardner, *Anc. Coinage*, 424, Reinach, *L'Histoire par les Monnaies*,

to consider the bimetallic hypothesis in all its aspects.

We must first determine whether Philip was minting gold when he altered his silver standard,⁹ or whether the coinage of gold by Philip and the standard on which it was struck were not more or less fortuitous accretions to his earlier schemes of monetary reform. While in most cases it would be rash to assign exact dates to Greek coins, occasionally it is possible to discover the year of issue. With Philip's coins we have several points from which to work, the year of his accession to power (359), and the date of the victory won by his race-horse at the Olympic games (356), a victory made immortal by the reverse type of his silver coins.¹⁰ In the same year he obtained possession of the gold mines beyond the Strymon river.¹¹

62 f., and Head, *Hist. Num.*², 222, support the ratio 10:1. Beloch, *Gr. Gesch.*¹, ii. 354, accepts the ratio $12\frac{1}{2}$:1.

⁹ Head, *Hist. Num.*², 222, says, "Philip having obtained possession of the hitherto unworked gold mines of Pangaeum (356 B.C.) . . . found it politically as well as financially expedient to reorganize the Macedonian currency on a new system modelled upon, though not identical with, that of Athens. His new gold stater . . . he made equivalent to the Athenian gold stater of 135 grs." This stater made it necessary for Philip, so Head argues, to adopt a silver drachm of about 56 grs. in place of the Persic stater. See note 6 above. Thus Head, with the other bimetallists, at least implies that the gold issue of 356 preceded logically, if not chronologically, Philip's adoption of a new silver standard. In this paper I shall try to show that the reorganization of the silver coinage was antecedent to the issue of gold "Philips".

¹⁰ Plutarch, *Alex.*, 3; cf. Hill, *Historical Greek Coins*, No. 43.

¹¹ Philip's intervention beyond the Strymon occurred between his capture of Amphipolis in the late summer of 357 and the Athenian alliance with the Paeonian, Thracian, and Illyrian princes in the first prytany of 356-5. Dittenberger, *Syll.*³, 196; Beloch, *Gr. Gesch.*¹, ii, 307 f.

There are good reasons for thinking that Philip's coinage began before 356, or in other words, that the adoption of the Phoenician standard for silver preceded the acquisition of gold mines by Philip. Busy as he was between 359 and 356, it is not likely that he forgot to order the mint-masters to strike coins. Fortunately in this matter we are not entirely dependent upon unsupported conjecture, for Professor Gardner cites coins which were undoubtedly issued before 356, when Philip's more famous series with its agonistic types began.¹² On the reverse of these coins is a horseman wearing *kausia* and *chlamys*, a coin type which, because of its use by previous Macedonian kings, and its canting allusion to Philip's name, was doubly appropriate for his initial issue.

This discrepancy in dates has been overlooked by numismatists who have argued that Philip adopted the Phoenician standard for silver, because, combined with gold staters of Attic weight, it would give him a bimetallic currency. Philip had no gold coinage when he first minted silver, and I doubt very much whether he even thought of minting gold in the early days of his career. Philip's plans had a habit of becoming more ambitious with every conquest. They grew with his good fortune.

The gradual growth of Philip's ambitions can be

¹² Gardner, *Anc. Coinage*, 423. Head, *Hist. Num.*², 228 f., in commenting upon the reverse types of Philip's coins, says they mostly refer to the Olympic games, but that the "horseman with *kausia* and *chlamys* is less certainly agonistic, and may (perhaps, with a play upon his name) represent the king himself as a typical Macedonian" knight. Since this type is non-agonistic, Professor Gardner suggests that it antedates Philip's Olympic victory of 356.

seen in the gold coins connected with his name. When his new colony Philippi was founded, it received a semi-autonomous position similar to that of Amphipolis after its conquest by Philip,¹³ or that of Thessaly after his first intervention in Thessalian affairs.¹⁴ The evidence for this is the coinage it issued with its own superscription, of gold, silver, and copper.¹⁵ The colony had changed its name and affiliation but not its status. It remained a colony, and, according to the Greek idea, its connexions with the mother state were religious and sentimental rather than institutional. Philip therefore in 356 intended neither to upset this theory nor to make Philippi a part of the territorial state of Macedon.

Although it is impossible to determine exactly when Philippi became a royal mint and ceased to strike money on its own account, we can see from the extant Philippian coins, small in number compared with those of Philip, that this autonomy was not for long. In Thessaly Philip's reorganization of the government into tetrarchies about 343 was probably followed by the cessation of local coinage on the hitherto prevalent Aeginetic standard and by the establishment of royal mints.¹⁶ Since this indicates a definite change of policy on the part of Philip, it is reasonable to

¹³ Beloch, *Gr. Gesch.*¹, ii. 308, note 3. For the autonomy of Amphipolis, see *ibid.*, 307; Dittenberger, *Syll.*³, 194.

¹⁴ Gomphi-Philippopolis had much the same status as Philippi. For its coins, see Head, *Hist. Num.*², 295. For the autonomous coinage of Simos of Larissa, see Hill, *Hist. Greek Coins*, No. 53.

¹⁵ Hill, *Hist. Greek Coins*, p. 80; Head, *Hist. Num.*², 217. Here Head dates Philip's acquisition of the mines in 358, although on p. 222 he gives the correct date 356.

¹⁶ Hill, *Hist. Greek Coins*, No. 53.

suppose that Philippi lost its mint privileges not later than 343.

Most writers • have thought that Philip's gold coinage began with the foundations of Philippi at the latest, *i. e.* about 356,¹⁷ but it is very doubtful whether the Olympic victory immortalized by the reverse type of Philip's gold staters¹⁸ was won by his two-horse chariot in that year. Had the games of 356 seen Philip's chariot and Philip's race-horse alike victorious, such an unusual combination of honours would have been considered worthy of mention beside Parmenio's defeat of the Illyrians and Philip's capture of Potidaea.¹⁹ Treasured in memory as another convincing omen of future successes for Alexander, it would have made the year of his birth even more auspicious.

The games of 352 were the first in which Philip's chariot could have won the prize; but perhaps it would be more in keeping with Philip's growing ambition to assign the beginnings of his gold coinage to the period after 348, when a final touch was given to Macedonian unity and economic independence by the conquest of the Chalcidic League, and the incorporation of its territory in the Macedonian state. Philip had now broken with his initial policy of working through autonomous allies and dependencies.

As Philip's actions in Thessaly, when he deprived it of the last remnants of independence and took from local tyrants like Simos of Larissa, and from towns like Philippopolis, the right to strike money in their own names, definitely committed him to an imperial policy, we may be able to postpone the beginnings

¹⁷ *e. g.* Head, *Hist. Num.*², 222.

¹⁸ Plutarch, *Alex.*, 4.

¹⁹ *Ibid.*, 3.

of gold coinage until after the games of 344. Up to this time, although Philip had made conquests and was well advanced towards imperialism, his policy had been in the main national and Macedonian. Henceforth, since his horizon was imperial, or at best Pan-Hellenic, a gold coinage rivalling the darics of the Great King or the owls of Athens would be most appropriate.

Thus, whatever date between 352 and 344 we assign to the initial issue of Philip's gold, it was probably coincident with the reorganization of his conquests and his determination to rule directly rather than through agents in more or less unreliable autonomous dependencies. It is fair to conclude also that Philippi lost its right of coinage about the same time, for Philip would not welcome a competing gold coinage within his dominions any more than the Great King, and in case he was willing to allow the minting of silver, which as we have seen was not permitted in Thessaly, the privilege was not abused, for the coins of Philippi are relatively scarce. Thus it is probable that both the gold and silver issues ceased at the same time, and that then Philip took over the mints for his own use. Henceforth the city's badge, a tripod, appeared as a symbol on many specimens of Philip's staters.²⁰

Another problem connected with Philip's gold is this: why did he mint gold coins of Attic weight instead of adopting for his standard the daric, since the daric for generations had been the most familiar gold piece in circulation on both shores of the

²⁰ Hill, *Hist. Greek Coins*, pp. 78 f. For the coinage of Philippi see *B.M.C. Mac.*, 96; Head, *Hist. Num.*², 217.

Aegean? Writers who favour the bimetallic hypothesis would probably say that Philip preferred the slightly heavier weight of the Athenian stater because then one of his gold pieces at the ratio of ten to one would be almost exactly equal to twenty-four silver drachmas of the new standard.²¹ It should be kept in mind, however, that Philip, as it were, fell heir to the mints of the cities he conquered, and that the Attic standard had been used for gold coins by some of these mints long before Philip thought of coining gold for himself.²²

The Chalcidic League had issued gold of the same weight as Philip's staters for many years. These Chalcidian gold coins Head dates shortly before 358,²³ while Professor Gardner thinks they were struck soon after 394.²⁴ He considers them imitations of the Athenian gold issue which began in that year. In this I think Professor Gardner is undoubtedly correct, for the gold and silver mines of the Chalcidic peninsula, situated near Stagira, probably came into the hands of the league during the first decade of the fourth century,²⁵ when it was actively extending its

²¹ Gardner, *Anc. Coinage*, 424; Head, *Hist. Num.*², 222.

²² Gardner, *Anc. Coinage*, 423, recognizes this fact, for he says "Philip seems to have taken the standard alike of his gold and silver coins from Olynthus".

²³ Head, *Hist. Num.*², 209, says that the Chalcidian gold was doubtless issued for war expenses. In that case the coins should rather be dated between 368 and 362. See note 58, *infra*.

²⁴ Gardner, *Anc. Coinage*, 293 ff., 339.

²⁵ West, *Chal. League*, 138. In the treaty between Amyntas and the League, Dittenberger, *Syll.*³, 135, made about 389, a list of Chalcidian enemies is given, i.e. those cities which had refused to accept incorporation in the League. Acanthos is mentioned but not its neighbour Stagira, whence it is probable that Stagira

power. Such a date for the issue of Chalcidian gold also makes it easy to explain the appearance of the Attic standard in Chalcidice, for the Chalcidians were allies of Athens in the anti-Lacedaemonian coalition of 395.²⁶ They might well have been familiar with the Athenian gold of the next year, and when ready to strike coins of their own, they would turn readily to Athens for a standard.

Philip in 348 gained control of these mines, and it is possible that together with the mines and the other valuable possessions of the league he appropriated to his own use both the standard and obverse type used by the Chalcidians. His gold staters, as well as some of his smaller coins, both gold and silver, have on them the head of Apollo laureate.²⁷

It must be noted, however, that Philip had other more important reasons for adopting Apollo as the patron of his new gold currency. In 346 he presided at the Pythian games, an honour that he would wish

had already succumbed. Furthermore, since the famous Chalcidic mint with its quantity production was most active from about this time, and evidently had larger quantities of silver to draw on than before, it is probable that the Chalcidians had obtained the mines situated near Stagira. These also produced gold. So far as I know, there were no other mines of importance in the territory of the League. The coins of Orthagoreia, assigned tentatively by Head, *Hist. Num.*², 203, to Stagira, as he says, agree "in style and weight with contemporary coins of Abdera and Maronea, and form an exception to those of the other Chalcidic cities". Gardner, *Anc. Coinage*, 325, goes even farther, and assigns them provisionally to Maronea. Since there is doubt about these coins, and since the weight of evidence seems to point to a dependent Stagira, it would be best to assign them to another city, possibly Maronea.

²⁶ Diod., xiv. 82; Isaeos, v. 46.

²⁷ Gardner, *Anc. Coinage*, 423; Hill, *Hist. Greek Coins*, p. 82; Head, *Hist. Num.*², 223 f.

to commemorate in some fitting way. He had now become the exponent of Pan-Hellenism, for on his silver tetradrachms were portraits of Zeus calling to mind the Olympic games, while his gold staters with their victorious biga and the head of Apollo just as readily reminded their fortunate possessors of the new president of the Amphictyonic League. Except that Plutarch distinctly states that Philip took care to have his Olympic victories recorded on his coins,²⁸ one might be inclined to think that the types²⁹ were intended to celebrate the events of 346 at Delphi. Perhaps Plutarch has made a mistake. The year 346 is as satisfactory for the first issue of *nummi Philippei* as 348 or 344, the dates of the two Olympic games that we have considered.

At any rate the Attic standard for gold was no novelty in Macedonia when Philip came to the throne, and between 359 and 352, when the breach between him and the Chalcidians began, he had plenty of opportunity to become acquainted with their issues. Thus, whatever his motives may have been, he was certainly following the path of least resistance when he adopted a standard already familiar to all merchants engaged in Macedonian trade. There would have been no point in adopting a lighter, less familiar weight, such as that of the daric.

Just as familiar to Philip were the coins of Philippi, also issued on the Attic standard. If, as I suppose,

²⁸ Plutarch, *Alex.*, 4.

²⁹ On some of Philip's smaller coins Heracles in lion skin formed the obverse type. Although this is a common Macedonian type, its resemblance to the type adopted by Crenides-Philippi is suggestive of the origin of Philip's gold coinage. Perhaps Philip struck small gold coins before his victory at Olympia.

the mint of that city rather than the example of the Chalcidians suggested to him the addition of a series of gold coins to the silver already in circulation, we must admit that his gold standard came to him as a sort of adjunct to the mint.³⁰ He continued its use because experience had shown that it was satisfactory, both in Philippi and in the Chalcidic peninsula, not because it made possible a bimetallic currency. Even if Philip had that aspect of the case in mind, it would be the result of his knowledge of Chalcidian coinage, where the two standards adopted by Philip had been used side by side since the first issue of gold by the league. If any one is to be credited with the intention of establishing a bimetallic currency based on the use of the Phoenician standard for silver, and the Attic standard for gold, the credit should go to a Chalcidian economist.

No one has made such a suggestion, so far as I know, for it was not infrequent to use silver and gold together without regard to the ratio between the two metals. Nor was it necessary that the coins should follow the same standard, as is clear, to take merely one example, from the coins of Philippi. There we have one standard for silver, perhaps two, used concurrently with another standard for gold,³¹ and if we

³⁰ See note 29, *supra*.

³¹ Head, *B.M.C., Mac.*, 96, describes coins weighing about 215 grs., 48 grs., and 24 grs. Since Philip in other cases did not require of his dependencies rigid uniformity in monetary matters, and since Thasos was minting coins of Rhodian standard, the first coin might be a Rhodian tetradrachm, very light. It might also be a light-weight Phoenician coin, as Head, *Hist. Num.*², 217, says. The other coins, which Head calls drachms and hemidrachms, are so light as to be perplexing. Judging from weight alone, we might consider them Aeginetic triobols and trihemiobols strayed from

follow the fortunes of the city back to its foundation by Thasian colonists about 360 we can add the Rhodian to our list.³²

There is much to be learned about Philip's policies from the history of Philippi's Thasian predecessor. For its settlement, and without doubt for its early successes as well, Callistratos, the exiled Athenian economist and statesman, was largely responsible.³³ To him, and not to Philip, we must ascribe the introduction of the Attic standard into the Pangaeian mining region, for the colony was founded at the latest only a very few months after the death of Perdiccas, at a time when Philip had shown no sign of desiring to interfere in trans-Strymonian affairs.³⁴ It is probable that Callistratos planned to turn the Pangaeian riches into coin for the payment of Athenian sailors stationed on the Thracian coast, hoping thereby to merit favour at home, and recall from exile.³⁵

their natural habitat. Perhaps they were designed for trade with the interior. The relations between Thasos and local Thracian dynasts had been close. We have a coin resembling those of Thasos with the name Bergaios, weighing 50 grs., and we have other contemporary coins of Lyceios, farther afield, from Paconia, which in weights correspond fairly closely, both as to lower and upper limits, with the silver coins of Philippi. Head, *B.M.C., Mac.*, 1 f.; *Hist. Num.*², 236, 283.

³² No extant silver from the Thasian colony before it changed its name is known to me, and so I presume the colonists used the silver money of Thasos. For standard, see Gardner, *Anc. Coinage*, 322.

³³ Scylax, 68; see also Pauly-Wissowa, s.v. Kallistratos; Schaefer, *Demosthenes*, i², 133 ff.

³⁴ Diod., xvi. 3, says that the colony, which he calls Crenides, was founded in 360-59, about the same time that Philip came to power. But as we shall see, Philip's silver coinage probably did not begin until two years later.

³⁵ Callistratos was obsessed with the idea of getting back to

Athenian generals during these years were notoriously in distress for want of money and supplies, and Timomachos, the brother-in-law of Callistratos, who was in command at Thasos in 361, was no exception to the rule.³⁶

Callistratos may have been acting in agreement with the Macedonians, perhaps even with Philip, for the head of Heracles which is found on the coins of the new colony was a common Macedonian type which had been used by Perdiccas III, and was to appear on some of Philip's coins, both gold and silver.³⁷ Callistratos had recently come from Methone.³⁸ Perhaps he had struck up a friendship with Philip there. At any rate, a little later he helped Philip to reorganize Macedonian finances, convincing proof that his relations with the monarchy were friendly.³⁹

I think it probable too that Callistratos was active in furthering the Athenian-Macedonian entente of 359.⁴⁰ Philip was then thinking merely of extending

Athens. Shortly before the foundation of Crenides, he had apparently expected Timomachos to help him. Later, when he actually did return without permission, he hoped that his many services to the state would be rewarded by a rescission of the judgement against him. Schaefer, *Demosthenes*, i², 134 f.

³⁶ (Dem.) i., 8 ff., 22 f. His seizure of Stryme, which was in dispute between Thasos and Maronea, seems to have been due to lack of funds. Timotheos, another general who had been active in this region, was in similar straits. Isoc., xv. 113; cf. Polyæn., ii. 10, 14; Arist., *Oecon.*, ii. 23, 1350 a. Both allied cities and friendly princes contributed, Ditt., *Syll.*³, 174.

³⁷ Hill, *Hist. Greek Coins*, No. 41; Head, *Hist. Num.*², 222 f.

³⁸ (Dem.) i., 46 ff.

³⁹ Arist., *Oecon.*, ii. 22, 1350 a. Although no date for the reorganization of Macedonian finances is given, it seems best to assign it to the early years of Philip's reign.

⁴⁰ Surely if Callistratos was instrumental in persuading Philip to recognize the Athenian claims to Amphipolis, he is to be

his power to the sea-coast along the Thermaic Gulf, and of regaining Pydna, as he made clear when he withdrew the Macedonian garrison from Amphipolis, and made the famous secret treaty which entitled him to receive Pydna in exchange for the city on the Strymon.⁴¹ Whether Callistratos actually took part in the negotiations leading up to this entente we do not know, but since he was one of the able foreigners whose advice was sought by Philip,⁴² we need not doubt that he used his influence to make them successful.

Thus the Thasian colony had an auspicious start. It apparently had nothing to fear from Philip, for Athens was to regain and hold the crossing of the Strymon. Furthermore, later events show that the colony relied in simple faith on his good will and friendly interest to protect it from envious enemies. In 357-6 the colony called upon Philip to defend its possessions against Thracian attacks,⁴³ and as a sign of its gratitude for the promptness of his response it changed its name in his honour. Perhaps it would be more correct to say that after having gone three years unchristened the infant colony now chose to call itself Philippi.⁴⁴ At that time the duplicity of its patron could not be foreseen.

pardoned for considering himself a benefactor of Athens so long as the entente stood.

⁴¹ Theop., frg. 165 a, d (ed. Oxon.); Dem., ii. 6 f.

⁴² Although this is not stated directly, it is to be inferred from the part played by Callistratos in the reform of Macedonian finances which must be dated in the first years of Philip's rule. Arist., *Oecon.*, ii. 22, 1350 a.

⁴³ Steph. Byz., s. v. Φιλίπποι.

⁴⁴ We learn from the coins that the colonists were content to call themselves Thasians of the Mainland, although the names

The foundation of Daton-Crenides in 359 may therefore be considered as the first fruits of the entente between Philip and Athens, an entente that was recorded numismatically in the Macedonian type used on coins of Attic weight. Athens and Macedonia were to work together in harmony and peace. Although this proved to be a vain hope, Callistratos, if he had a part in the formation of the agreement, should not be blamed, for no one, not even Philip himself, knew in 359 that his initial schemes for the rehabilitation of Macedonia would expand into the establishment of a greatly enlarged kingdom.

It is apparent now that Philip had as little concern with the standard adopted for the gold coins of this Thasio-Attic colony as he had in the coinage of Philippopolis.⁴⁵ Finally, when his coinage superseded that of Philippi it was perfectly natural for him to continue the gold standard used by the Chalcidians and Philippians alike, just as any state issuing a new currency is likely to copy that with which it is most familiar, and which is accepted without question in its markets. It seems then as though accident rather than design was responsible for the precise weight of Philip's gold.

In this connexion it should be mentioned that as late as 335 the gold coins of Philip, even though a trifle heavier than the daric, were considered no more

Daton and Crenides are frequently used to designate the colony. See Hill, *Hist. Greek Coins*, p. 79, note 1, for the generally accepted view, as to the ancient use of these names.

⁴⁵ Philip's lack of concern in the standard used by the Thasian colony will be clearer when I show that Philip did not change the silver standard of Macedonia until about two years after the founding of the colony in 359.

valuable,⁴⁶ proof that the few grains difference in weight was of little importance in the operations of that day, and that it could have been, and probably was, disregarded in Philip's calculations.

Having seen how Philip almost fortuitously came to adopt the Attic standard for gold in preference to that of the daric, we must now consider whether the ratio between gold and silver in the early part of Philip's reign was actually ten to one, for from this ratio the assumption that he was a bimetallist gains most of its plausibility. In addition to gold staters, which at ten to one would equal twenty-four of his silver drachms, Philip coined as divisions of the stater, halves, quarters, eighths, and twelfths. Thus these small coins would be accepted as equal to six, three, and two drachms respectively.⁴⁷

But it should not be forgotten that the unit of Philip's silver coinage was a tetradrachm, and so we ought to value his gold fractional coins in multiples of this silver unit. At a ratio of ten to one, the small gold pieces would pass for three, one-and-a-half, three-quarters, and one-half of a tetradrachm. At the common rate in Asia, thirteen-and-a-third to one, which must have exerted an influence on, if it did not determine, the market value of gold throughout the Greek world,⁴⁸ Philip's small coins would pass for four, two, one, and two-thirds of a tetradrachm, which is on the whole much more convenient than

⁴⁶ Ditt., *Syll.*³, 251, ii. 10, note 15; cf. 253, ii. 11, note 14.

⁴⁷ Gardner, *Anc. Coinage*, 424; Reinach, *L'Histoire par les Monnaies*, 62; Head, *Hist. Num.*², 222 f.

⁴⁸ For influence of the Persian mint ratio on Greek exchange, see Beloch, *Gr. Gesch.*, ii², 2, 90.

if the ratio were placed at the hypothetical figure of ten to one, and more in accord with the natural supposition that the fractional gold coins would be made equal to even multiples of his silver unit.⁴⁹

We must first determine the ratio of gold to silver before concluding that Philip was a bimetallist. It would seem as though writers had based their argument for a ratio of ten to one on the peculiar divisions of Philip's gold,⁵⁰ and that then they used this ratio to prove that Philip, with meticulous regard for weights, planned to have his gold coins pass for convenient multiples of his silver, or in other words that he was a bimetallist. We can make no advance by arguing thus in a vicious circle.

Of course it would be convenient to issue fractional gold coins to equal a definite number of silver units, and it may be that Philip had that possibility in mind, but we do not know how his fractional coins compare

⁴⁹ When Head, *Hist. Num.*², xliii, tried to show that the silver coin standards of the Thracian coasts, particularly those of Abdera, were in large measure determined by the value of gold, he assumed, as I have done, that the stater or tetradrachm "was exchangeable in round numbers with contemporary units of gold, . . . whenever small gold coins were issued side by side with large silver pieces of the same city", and also that "the gold unit from first to last would be equivalent to 8 silver staters". But in laying stress upon the small denominations of Philip's gold, writers have tended to obscure the fact that the system of division employed by Philip is in no way peculiar, and therefore needs no explanation. Philip's denominations are the same as Athens used for her silver, drachm, triobol, trihemiobol, and obol, with this slight difference, that Athens coined a diobol also. The Athenians after 394 also issued gold triobols and diobols, perhaps other denominations as well. Some day one of Philip's diobols may come to light, and then the source of his fractional currency will be apparent.

⁵⁰ Others accept the ratio of $12\frac{1}{2}:1$, e.g. Beloch, *Gr. Gesch.*¹, ii. 354.

in date with his first issue of gold,⁵¹ or even with one another. Nor do we know that the fractions remained unaltered as the ratio changed.⁵² We cannot argue backward from an undated gold obol as to the motives which impelled Philip to adopt the particular standards he used for gold and silver, nor does the obol prove anything as to the value of gold at a given date.⁵³

⁵¹ It is possible that the non-agonistic reverse types of his small gold coins indicate a date of issue earlier than that of his staters. Furthermore, the obverse type of the half-staters, quarters, and eighths, with the young Heracles in lion skin, does not bear any relation to the Apollo type of the staters. Thus these coins may have been minted in Philip's early days before quantity production of gold had sent down the price. Or again, the small coins might have been minted towards the end of his reign when gold had sunk in value. For the types of these coins see Head, *Hist. Num.*², 223.

⁵² The obols which have an Apollo type resembling the staters may be of a late date, when gold in Macedonia was perhaps worth ten times its weight in silver, and the larger denominations may be comparatively early.

⁵³ To show how easy it is to explain peculiarities of standard by means of the bimetallic hypothesis, I should like to apply it to the coinage of Thasos and its mainland colony, Crenides-Philippi. Assuming that, before mining operations began on a large scale, the market price of gold was determined by its value at the Persian mint, as it was in Athens in 438-7, *J. G.*, iv. 1, p. 146, it would take fourteen ounces of silver to buy one of gold, since the merchant who imported it would need a commission of approximately five per cent. Then a gold stater of about 131 grs. would buy about eight Rhodian coins of 230 grs. such as were minted at Thasos about that time. A few years later, when the mines had begun to produce, the price of gold would be determined by the cost of exporting the bullion to Persia, and we may say that it was now at a slight discount, perhaps 13:1. The new gold staters of Philippi, weighing 133 grains, would still be made to exchange for eight tetradrachms, but the silver coins would now weigh 215 grs. That is exactly the weight of a Philippian coin. After a few years more of quantity production the market might have become glutted, and the price still further reduced. Let us assume a ratio of $11\frac{1}{2}$:1. The silver coins would now have to weigh

The information we possess about the relative values of gold and silver in fourth century Greece is very scanty, but certain inscriptions found at Delphi, dated between 335 and 327, enable us to ascertain the approximate values for that particular time and place. Since the exchange value in the public money-market was then between ten and eleven to one—a daric was tarified as equal to seven-and-a-half Aeginetic staters—and since the temple treasurers, who apparently took gold only at a discount, offered seven staters for a daric, the ratio then being about ten to one,⁶⁴ we may

only 192 grs. to make eight equal to a gold stater. Although we have no tetradrachms of this weight, we have smaller coins weighing about 24 and 48 grs., drachms and triobols of exactly this norm. For a similar calculation, see Head, *Hist. Num.*³, xlii f. Head's theory that one gold piece of about 130 grs. should exchange for eight silver staters is the same as the one I have applied independently to the coinage of Crenides-Philippi, but with quite different results. Head concluded that the gold-silver ratio from about 400 to 356 was 11:1 and 10:1 about 356. But if the theory is good for one period, it should be good for another, and Head does use it for the coins of Maronea which he dates between 400 and 356, *i. e.* in the period when the Thasians of the mainland first minted gold coins. By Head's own figures and methods of calculation we should have to conclude that the ratio about 360 was 14:1 not 10:1. Thus it is clear that a new study must be made as to the value of gold in terms of silver. Furthermore, if Head's thesis should be correct that the Thracian coins prove a close connexion between the gold-silver ratio and silver standards, Philip, with the Philippian experience fresh in mind, would have been rash to attempt a bimetallic currency. He would have learned that stability was impossible, and that quantity production would inevitably reduce the price of gold, a fact that was known to the economist author of the treatise on the *Revenues of Athens*, iv. 10.

⁶⁴ Dittenberger, *Syll.*³, 251, ii. 10, note 15; cf. 252, 7 ff., note 4; 253, ii. 11, 32, note 14. From these inscriptions Bourguet, *Admin. finan. d. Sanct. Pyt.*, 25, has concluded that the gold-silver ratio was 10:1. Cf. Gardner, *Anc. Coinage*, 425. The conclusion is based on the following reckoning: 1 daric = 7 Aeginetic staters =

feel sure that even in Macedonia at the time when Philip came to the throne, *i. e.* before the mines had been exploited, gold was more than ten times as valuable as silver. Between 356 and 335 Greece had been flooded with Macedonian gold, and by 327 the Persian treasuries had been rifled to swell the stream of gold flowing into Greek markets. Certainly the rapidity with which the supply of gold increased in

20 Attic drachms. Therefore a daric was worth approximately ten times its weight in silver. (One of Philip's gold coins was considered no more valuable than a daric. Ditt., *Syll.*³, 251, ii, 10, note 15. [Cp. Reinach, p. 54: from Arrian iv. 18. 7 it appears that "daric" is used for the heavier coin.—G.F.H.] Thus it is permissible to reckon in darics and to disregard the slight difference in weight between the two coins.) But it seems to me that it would be simpler and more accurate to determine the ratio without reference to Attic exchange. We ought to reckon in terms of the standard current in Delphi, or at least to take into consideration the agio charged by the money changers. Assuming that the Aeginetic or "old" standard of Delphi was at a discount when exchanged for Attic coins, we must conclude that a gold piece in Athens would buy more than twenty drachms, or in other words, that gold was worth more than ten times as much as silver. From Ditt., *Syll.*³, 252, 7 ff., note 4, it seems to be clear that the open market price of a daric was $7\frac{1}{2}$ staters, although the temple treasurers counted it as only 7. Thus $7\frac{1}{2}$ staters of about 188 grains, such as were issued at Delphi at this time (Hill, *Hist. Greek Coins*, No. 52. This coin should be dated after 338. Ditt., *Syll.*³, 250, note 19), would weigh about 1,410 grs., not quite eleven times the weight of a daric. Even seven of these coins would weigh a trifle more than ten times as much as a daric. It is possible that the treasurers reckoned in staters of the "old" currency, as they did in 335 (Ditt., *Syll.*³, 251, ii, 11, note 15), and it is probable that these "old" staters were not quite so heavy as the new. But even though they were considerably lighter, $7\frac{1}{2}$ staters would weigh more than ten times a daric. Weighing 184 grs., which is an average weight for an Aeginetic stater, seven of them would be enough to buy a daric at a ratio of 10:1. On the whole, a ratio of 11:1 in the open market is as probable as a ratio of 10:1.

Greece was ample cause for its depreciation in value.⁵⁵ Furthermore, after Alexander's conquests, Persia's official rate, which had kept the value of gold pegged at thirteen-and-a-third times the value of silver, was no longer operative to keep the market for gold steady.

Professor Gardner, although he says that Philip tariffed gold at ten to one, naturally understands that the great quantity of gold produced from the Macedonian mines was not without effect in lowering its price.⁵⁶ Apparently he has not realized that Philip began to coin silver before the depreciation in the value of gold resulting from the exploitation of the Pangaeian mines could be felt, or even estimated, and that he first struck gold coins long before the hypothetical ratio of ten to one had been reached. With gold at least ten times as valuable as silver about 330,

⁵⁵ From the Pangaeian mines Diod., xvi. 8, says that Philip took 1,000 talents a year. Even though this figure is probably exaggerated, the production of a few years must have had a marked effect on the price of gold. To the Macedonian must be added the Delphian gold, which came into circulation after 356. This amounted to 8,000 talents at the very least. Diod., xvi. 56; cf. Beloch, *Gr. Gesch.*, ii¹, 853. Then in 331-30 Alexander found 9,000 talents of gold darics at Susa, and an unknown amount, certainly not less, at Persepolis. Diod., xvii. 66, 71; Arrian, ii. 16, 18.

⁵⁶ Gardner, *Anc. Coinage*, 424; cf. 86, 419. If, as Prof. Gardner says, the fall in the price of gold was due in part to Philip's mines, it must have followed his change of standards. See also Reinach, *L'Histoire par les Monnaies*, 52; Head, *Hist. Num.*², 222. Head, in the same way, after admitting that the Pangaeian mines brought down the ratio between gold and silver to 10:1, makes the new ratio a condition precedent to Philip's reorganization of Macedonian silver currency. But since in fact the silver reform was undoubtedly antecedent to the change in ratio, the position of the bimetallic theorists is untenable.

fifteen years earlier it must have been worth considerably more, and in 356 its decline can hardly have begun. Just how it compared with silver then we cannot say, although it has been thought that the ratio in the first years of the fourth century was twelve to one.⁵⁷ If gold was really worth twelve times its weight in silver in 394-3, it could have been only a little less valuable when Philip came to the throne, for there had been no great influx of gold into Greek markets before his time. Whether twelve or thirteen to one was the ratio in the first half of the century is immaterial to our discussion, for it was, I think, a secondary consideration with Philip himself.

No one will venture to say that gold was worth only ten times its weight in silver when the Chalcidians first combined the Phoenician standard for silver with the Attic standard for gold,⁵⁸ a combination which we have seen was known to Philip, and which he was consciously or unconsciously imitating; nor has any one, I think, credited the Chalcidians with bimetallic

⁵⁷ For the ratio of 12:1, see Gardner, *Anc. Coinage*, 36, 292; (Plato), *Hipparchus*, 231 d. For Head's theories as to the prevalence of this ratio on the Thracian coast about 400, see *Hist. Num.*², xlii f. I hesitate to accept this figure, for if the huge quantities of gold from Philip's mines had no greater effect than to lower the ratio from 12:1 to 11:1, the greater fall between 438 and 407, from 14:1 to 12:1, is inexplicable.

⁵⁸ Even if we date the Chalcidian gold coins with Head, *Hist. Num.*², 209, just before 358, and consider them as minted for war purposes, we should have to accept a higher ratio than 10:1. If they were issued for war purposes, they must be dated between 368, when war broke out between Athens and the League, and 362 when active operations apparently ceased. West, *Chal. League*, 110 ff. This was before the foundation of the new Thasian colony Crenides-Philippi. Head's ratio for this period is 11:1. *Hist. Num.*², xliii.

designs. The same caution should be observed in ascribing to Philip a practice that was not common in Greece.

Having discussed the bimetallic hypothesis from the standpoint of Philip's gold coinage, we can now return to his choice of the Phoenician standard for silver. Writers who have cited the standards of Philip's gold and silver as proof that he was a bimetalist have argued that it was necessary for him to change his silver standard in order to get a satisfactory bimetallic currency.⁵⁹ This argument is without basis in fact, for the Macedonian staters of about 160 grs. at the ratio of ten to one would be worth almost exactly an eighth of a daric;⁶⁰ at twelve-and-a-half to one, the ratio accepted by some writers, a daric would be worth ten staters.⁶¹ Thus it is impossible to argue that Philip adopted new standards because he wanted

⁵⁹ Hill, *Hist. Greek Coins*, p. 81, says: "It is difficult to see what can have been his object in reviving this standard, unless he wished in some way to regulate the ratio between gold and silver". See also Head, *Hist. Num.*², 222 f., as quoted note 6, *supra*.

⁶⁰ Head's calculations, *Hist. Num.*², xliii, do not bear out his statement on p. 222, that "it was customary to exchange 1 gold stater against 24 silver drachms", at least so far as concerns the Thracian coast. On the contrary, Head bases his whole argument on the theory that a gold stater should equal eight tetradrachms, not six, and he states that after 356, when the ratio was 10:1, the coins of the Thracian coast were reduced to 160 grs. to correspond to this custom. It is to be noted that the Macedonian coins had apparently sunk to this weight even before Philip, *i.e.* before the ratio of 10:1 had been reached even according to Head's hypothesis. Thus Philip had no need to change standards, provided that Head's hypotheses as to the value of gold and the date of Philip's reforms are correct, for he would have had in 356 a bimetallic currency.

⁶¹ Beloch, *Gr. Gesch.*, ii¹, 354. With one gold coin equal to ten silver staters, Philip's coinage would have been similar to that of the Great King.

to make his silver coins equal to definite fractions of his gold.

Since we have seen that Philip might have had a satisfactory bimetallic currency by the simple expedient of adopting the gold daric as a standard without any change in his silver, provided that the ratio accepted by the bimetallists really represented the value of gold, and since the other evidence on which the bimetallic hypothesis rests is at best inconclusive, it will be necessary to look further for an adequate explanation of his choice of the Phoenician standard.

First let us consider why Philip was not tempted by the popular Rhodian standard, which Professor Gardner thinks he would normally have adopted, since it was almost as dominant in the Aegean during the fourth century as the Attic had been at the height of Athenian power in the fifth. The chief reason for Philip's rejection of this standard was undoubtedly the lack of direct contact between Macedonia and the cities where it was used. On the coast of Thrace only two important towns, Aenos and Thasos, issued coins of that weight. The real popularity of the standard was confined to the eastern Aegean.

If Philip had adopted this standard we might argue that he was planning closer contact with the districts where it was in common use, that he was looking towards Thrace and Asia Minor for commerce or alliances or conquest. Since he did not do so, we may conclude that his dreams of controlling the Aegean and the Thracian coast, if he had any in the formative period of his ambition, did not influence his monetary policy.

His lack of interest in the Thracian coast is apparent also from his breach with the Persian standard which was used by the two important commercial cities of Abdera and Maronea.⁶² With neither of these cities could Macedonia have had any very close relations early in Philip's career. Macedonia had yet to acquire sea-coast and ports, and its foreign commerce was in the hands of cities nearer home.

As we have seen, Philip did have some contact with Thasos through Callistratos, but his failure to adopt the standard used by Thasos rather confirms our earlier conclusion that his initial schemes were modest, and did not extend beyond the Strymon river. He had renounced Amphipolis, and he had allowed Thasos's claims to the mining region to go unchallenged. The Rhodian standard, therefore, had no attractions for Philip, simply because he had never conceived it possible for Macedonian dominion or commerce to extend to the point where that standard would be necessary or expedient.

Philip was an opportunist in many ways. He often allowed the logic of circumstances to determine his next move, as is clear from the reformed Amphictyonic currency of which he was perhaps a sponsor.⁶³ Although he was then at the very height of his power, instead of forcing upon central Greece the use of his own

⁶² Head, *Hist. Num.*², xliii, 255; Münzer und Strack, *Ant. Münzen Nord-Griechenlands*, ii, Thrakien, p. 34. The coins of Abdera by 360 had sunk to about 160 grs., a weight very close to that of the Macedonian coins of Philip's immediate predecessors. For the coins of Maronea, see Head, *op. cit.*, 250.

⁶³ Delphian inscriptions show that the coins tentatively dated after 346, Hill, *Hist. Greek Coins*, No. 52, were minted first after 338. See Dittenberger, *Syll.*³, 250, note 19.

standard, as he had done a few years earlier in Thessaly and elsewhere, he allowed Delphi to retain the Aegietic standard. Philip's coinage policy here was determined by the needs and possibilities of the moment, as it had been about twenty years before when he chose a standard for Macedon.

In Alexander's monetary reforms we can find a clue, I think, to the motives of his father. Both of them issued gold and silver side by side, and both of them changed their silver standards. Alexander, being a monometallist, was not at all concerned about the relationship between gold and silver,⁶⁴ although with the increase of gold in circulation one might imagine that the problem would be more pressing in Alexander's time than it had been a quarter of a century earlier. If Alexander could afford to disregard the difficulty of exchanging gold for silver pieces, it is reasonable to suppose that his father likewise allowed the money-changers to settle the problem as best they could.

Alexander reformed Macedonian currency with a definite political purpose in view.⁶⁵ After his reorganization of the Hellenic confederacy, as hegemon of the Greeks and king of imperial Macedon, he needed a coin standard with the traditions of empire behind it, and a reputation second to none, a symbol that the old particularism of Greece was a thing of the past. For this there was nothing more suitable than the Attic standard which Philip had employed

⁶⁴ Gardner, *Anc. Coinage*, 425. Reinach, *L'Histoire par les Monnaies*, 57, 73, followed by Head, *Hist. Num.*², 224 f., has taken the contrary view.

⁶⁵ Cf. Hill, *Hist. Greek Coins*, p. 104.

for gold, and which Alexander now used for both metals. Political reasons determined the specific changes made by Alexander, and we may presume that political reasons also were a determining factor in the reforms of his father.

It is unnecessary to cite numerous examples of coin standards altered because of political considerations. I shall mention only those that concern Macedonia. Up to the end of the fifth century the Phoenician standard was in use there, while in the Chalcidic peninsula, where Athens was dominant, the Attic standard prevailed. Then came the revolt of the Chalcidians and the formation of a monetary alliance between some of the revolting states.⁶⁶ As Perdiccas had persuaded the allied states to rebel, his standard, the Phoenician,⁶⁷ was adopted for the new issues. After Amphipolis went over to Brasidas, that city too began to strike coins on the Phoenician standard. Other cities followed suit, until the standard was almost universal in the neighbourhood of the Chalcidic peninsula.

When Archelaos came to the throne, he was desirous

⁶⁶ West, *Class. Phil.*, ix. 24 ff.; Gardner, *Anc. Coinage*, 281 f.

⁶⁷ Since the alliance with Perdiccas was, in the first instance, responsible for the dissemination of the Phoenician standard so generally throughout this region, Professor Gardner, in calling the standard Abderite, is in danger of obscuring the fact that it came to the Chalcidic peninsula directly from Macedonia and not from Abdera. Of course, political considerations alone would not have been sufficient to cause a change of standards, but there is no reason for thinking that the Chalcidians were looking towards Abdera. They must have seen the importance of friendly commercial relations with the interior, and they undoubtedly looked upon Macedonia as an important market. Hitherto their trade with that country had been hindered by a difference in coin standards. This difficulty was now remedied.

of strengthening Macedonia, unifying it, and extending its influence. Among other things it would seem that he wished to make it commercially independent of the Chalcidians, for he adopted the Persian standard in place of the Phoenician, and thereby broke ties which had bound Macedonia and the Chalcidic peninsula together.⁶⁸ As the change of standard acted as a sort of barrier to foreign traders, it was evidently intended to make the kingdom more self-sufficing, and to go hand in hand with the development of roads and sea-coast towns.⁶⁹

Since Philip in adopting the Phoenician standard was simply reversing the reforms of Archelaos, and doing what the Chalcidians had done in 432, it is possible that a similar combination of motives was at the back of his decision. But before making an analysis of Philip's motives, we must consider carefully the problems with which he was faced when he began to rule.

As Macedonia was then only a weak and backward state, harassed and overrun by numerous enemies, Philip's first task was to buy off or defeat the invaders. At first he had no interval of quiet in which to lay far-reaching plans for the future. It was enough for him to set as a goal the regeneration of Macedonia, the restoration of frontiers, and the acquisition of a modest coast-line at Pydna. In the first years of his

⁶⁸ Gardner, *Anc. Coinage*, 332 f. The breach with the standard used by the Chalcidians was not complete, since the two standards worked well together. Four obols of Persian weight were the equivalent of one Phoenician drachm. *Ibid.*, 289.

⁶⁹ For Archelaos's reorganization of Macedonia, see Kaerst, *Hellenist. Zeit.*, i. 115 ff.

rule, spent mainly in ridding the kingdom of its foes, came the entente with Athens, and the withdrawal of the Macedonian garrison from Amphipolis.

In 357 the situation had changed. Philip's position was now reasonably secure, the army was well organized, and both troops and general had shown themselves superior to their numerous adversaries. With increased self-confidence and a new spirit of assurance Philip could revise his plans and work for an enlarged Macedonia that two years before would have seemed beyond the realm of possibility.

Athens with her old claims, and her control of the Macedonian coast, stood in Philip's way as a very real obstacle, and a potential enemy. Athens, as he knew, would never willingly renounce Amphipolis, nor was it likely that she would surrender Pydna and Methone without a hard struggle. In one point the Athenian position was weak. The balance of power in the north was held by the Chalcidic League, the great commercial rival and bitter enemy of Athens. Although weakened by years of almost incessant warfare the league was still powerful, and knowing from bitter experience the policies of Athens, it would not welcome further increase of Athenian trade and political influence in Macedonia. In proportion as Athens gained, Chalcidic prosperity was bound to suffer.

On the other hand, Philip could not afford to take for granted Chalcidic co-operation. Athens might conceivably offer in exchange for Chalcidic friendship timely renunciation of her ancient claims and promises of trade and territory in Macedonia. In that case, unless Philip made a very attractive counter-offer to assure himself of Chalcidian support, Athens

might be able to outbid him. His position would then be vulnerable, and his hopes of gaining a sea-coast would then be imperilled.⁷⁰

Philip knew that Macedonian trade meant a great deal to the Chalcidians. In the reign of Amyntas they had demanded considerable concessions in return for an alliance,⁷¹ and in 368 they had interfered in a dynastic quarrel so as to assure themselves of a ruler friendly to their interests.⁷² Having suffered much through rivalry with Athens since then, they were probably now eager to increase their share of Macedonian commerce at the expense of their chief competitor. Since the two states were nominally at war with another, the Chalcidians could, without running any risk, ally themselves with Philip, and thereby win the greater part of the trade previously held by Athens. This trade was worth a struggle, for the Macedonian imposts alone amounted to forty talents annually.⁷³ Neither side was likely to surrender the middleman's profit without a conflict.

Having made his choice between the rival claimants for Macedonian trade, Philip had to convince the sceptical Chalcidians that their interests were his, and that the Chalcidic peninsula and Macedonia together formed an economic unit in which Chalcidian merchants might claim a privileged position and a practical monopoly of trade and commerce. By adopting the

⁷⁰ Dem., ii. 6, shows that the Chalcidians would have come to terms with Athens if Athens had been ready to meet them half way.

⁷¹ Dittenberger, *Syll.*³, 135; West, *Chal. League*, 172.

⁷² West, *Chal. League*, 110.

⁷³ They had been increased by Callistratos from twenty talents, according to Aristotle, *Oecon.*, ii. 22, 1350 a.

coin standards used by the Chalcidians, Philip gave ocular proof of the reality of this union, and showed his willingness to consider Macedonia a field for Chalcidic commercial expansion.

Furthermore in proportion as this measure facilitated trade between Macedonia and the Chalcidic peninsula, Philip was also weakening Athens, and assuring himself of friendly markets whenever the expected breach might come. Otherwise he might find himself cut off from the outside world at a critical moment. As the Macedonians came to realize during the Olynthian war, even a backward state might suffer considerable discomfort if prevented from selling its raw products and buying manufactured goods abroad.⁷⁴ Thus Philip had ample reason for making his currency conform to the standard used by the merchants whom he needed to conciliate, and with whom he expected to do the larger part of his business.

Amphipolis was another great commercial centre, so situated as to be able to profit from Macedonian trade and commerce, and Amphipolis also used the Phoenician standard. The friendship of Amphipolis was almost as desirable as that of Olynthos. There was this difference. Philip almost immediately, we do not know exactly why, found it necessary to obtain guarantees that conflicted with Amphipolitan independence, and this brought on a struggle in which the city towards the end of 357 came into Philip's hands. Quite possibly Philip's currency reforms were intended to bind the commercial interests of both states more closely to himself. That he was successful

⁷⁴ Dem., ii. 16.

in accomplishing this will be evident when we come to consider later developments.⁷⁵

Up to this point I have not attempted to give a precise date to the beginnings of Philip's silver coinage. Since Philip, as we have reason to believe, acted for some time as guardian to his nephew Amyntas without claiming for himself royal dignity,⁷⁶ coins issued during this period would bear, not Philip's name, but that of the infant king. Specimens of such an issue have possibly been preserved.⁷⁷

Although the date of these coins cannot be determined precisely, it was quite in keeping with the character of Philip to allow his nephew to retain the title as long as the throne was insecure, and then to assume it for himself when circumstances suggested. Philip's plans in just this fashion always tended to become more ambitious as victory after victory pointed the way. Therefore, since the capture of Amphipolis comes at the turning-point of his early career, we may confidently assert that Philip decided to be king in name about the same time that he determined to

⁷⁵ For the importance of Amphipolis to Philip, see Dem., xxiii. 111; Isoc., v. 5; Theop., frg. 230a. His success in winning partisans in the city is evident from Dem., i. 5. Another reason for thinking that the majority of the citizens looked upon Macedonia with approval or indifference is the autonomy granted to the city after its capture. Philip did not immediately incorporate it in Macedonia. As concrete evidence for this autonomy we have an Amphipolitan decree banishing from the city advocates of an alliance with Athens against Philip. Dittenberger, *Syll.*³, 194.

⁷⁶ Justinus, vii. 5, 9; Beloch, *Gr. Gesch.*¹, ii. 309.

⁷⁷ These are the coins assigned by Head to the second reign of Amyntas III, *Hist. Num.*², 222. As Beloch, *Gr. Gesch.*¹, ii. 309, note 1, has pointed out, they resemble in style coins of Perdiccas III.

risk a conflict with Athens by seizing control of the lower Strymon.

It was then that the coins of Amyntas ceased and those of Philip probably began, and the fact that the standard changed just when Philip first needed Chalcidian friendship is to me further evidence that he hoped to get support by this means. Furthermore, Philip did not rest content with monetary uniformity. He surrendered to the league Anthemios,⁷⁸ a gateway to Macedonian trade, for whose possession there had been serious disputes in the past, and then, to deprive Athens of her last foothold in the peninsula, he captured Potidaea and handed it over to his newly made allies.⁷⁹ Thus by the year 356 Philip had given convincing proof that his adoption of the Chalcidian standard for his silver coins was not a meaningless gesture, but the first step in the formation of a co-operative enterprise in which the Chalcidians were equal partners. Their profits were to come from the development of Macedonian commerce.

We have now come to the point where we can trace the results of Philip's measures in the policies and internal politics of the Chalcidic League. From the confusion of policies between 357 and 348 it is clear that two major parties were struggling for the mastery, one of them pro-Macedonian and the other apparently more or less pro-Athenian, but in reality intensely national, in its aims. The pro-Macedonian party was on the whole dominant, evidence that Philip had not been mistaken in thinking that the

⁷⁸ Dem., vi. 20; Diod., xvi. 8.

⁷⁹ Plutarch, *Alexander*, 8; Dem., ii. 7. For the alliance see also Dem., xxiii. 108.

Chalcidian merchants would realize the interdependence of the two countries, and would use their influence to keep Chalcidian foreign policy in line with his.

Demosthenes has given us an utterly inadequate explanation of the strength of the pro-Macedonian party.⁸⁰ He says that Philip's successes against Olynthos were due to bribery and treachery.⁸¹ In other words, Philip's adherents were mainly paid agents. We need not minimize the bribery, for Philip undoubtedly knew as well as more modern politicians how to subsidize propaganda by means of lavish gifts to friends and agents; yet bribery alone could never have created such a strong pro-Macedonian party in the Chalcidic peninsula. After all, bribery affects only individuals.

Commercial concessions, on the other hand, mean the prosperity of whole classes, and similarity of coinage in the days of ancient Greece was almost equivalent to the more modern Zollverein. These were the bribes that Philip found most effective, for they provided rank and file for the party of which the paid agents were probably the noisy leaders.

Philip's success in securing a body of well wishers in the Chalcidic League will be evident from a brief survey of party strife from about 352 to 348. The parties were very evenly balanced, and the struggle to control Chalcidian foreign policies was bitterly

⁸⁰ The inadequacy of Demosthenes' explanation first prompted me to seek another cause for the strength of the pro-Macedonian party. The connexion between Philip's monetary reforms and the needs of the Chalcidian traders then became apparent. See West, *Chal. League*, 173.

⁸¹ Dem., xix. 265 f.

fought.⁸² It is to be presumed that as a class the merchants formed the bulk of the pro-Macedonian party, for their prosperity depended upon the maintenance of close relations with Macedon. With money becoming more plentiful every day—Philip had difficulty in disposing of it all in legitimate ways—prices must have been rising, and the demand for foreign luxuries increasing by leaps and bounds. On the other hand, a breach with Philip meant both an end to their huge profits, and friendship with their chief competitor. There would be no compensations for this prospective loss of Macedonian trade, since the merchants had little to fear even if Philip should decide to incorporate the Chalcidic peninsula in his kingdom to which it geographically belonged.⁸³ Their profits could not be less, and their opportunities for trade might well be bettered.

There was possibly something more than business behind their friendship for Philip, and their indifference to the patriotic appeal. The Chalcidic League was in reality almost a territorial state of the

⁸² Dem., ii. 6, shows that before the Chalcidic-Macedonian alliance was made about 356, the pro-Macedonian party was not strong enough to prevent the proposal of an agreement with Athens. This was rejected, but it probably made clear to Philip the need of building up a party friendly to his interests. Thus the first chapter of the party struggle illustrates Philip's difficulties, and makes his success the more striking. Philip's party was dominant from 356 to 352.

⁸³ By 352 Philip could get along without the Chalcidians if need be, for he now had a sea-coast and two important harbours, Pydna and Amphipolis. Moreover, he was planning to build a navy, and without doubt he would then develop a merchant marine as well. Hence the Chalcidian merchants had all to lose and nothing to gain by denouncing the alliance with Philip.

modern type. Particularism had been overcome with an ease that foreshadowed further political developments, and made a union of larger groups no longer inconceivable.⁸⁴ Just as upon the geographical unity of the Chalcidic peninsula had been built a successful political union, so a union of the peninsula with its natural hinterland was both expedient for the merchants, and within the bounds of practical politics for far-sighted statesmen who saw the faults of Greek particularism becoming more evident each year.⁸⁵

In 352 the issue between military autocracy and self-government was not yet clearly drawn. Amphipolis had been conquered, but it had been allowed its autonomy. Philippi had been founded, but it was coining gold on its own account. Thus Philip had still to gain his sinister reputation as an oppressor of free cities.

Such may well have been the attitude of the Chalcidian merchants, but they were not always able to control the government. The other party, which took as its platform defence of national independence, was probably made up of landowners. Philip was particularly active in bribing members of this class, if we may credit Demosthenes' stories of bribes in the form of grazing rights and stock. Not being interested in trade except as they might find it necessary to market their surplus agricultural products, they were more fearful of the state which had spread so rapidly

⁸⁴ Xen., *Hell.*, v. 2, 11-19, gives a brief account of the principles on which the League was based. See also West, *Chal. League*, 135 ff., 141 ff.

⁸⁵ Was the Hellenic union of Philip and Alexander suggested in part by the successes of the Chalcidic League combined with the teachings of ardent Pan-Hellenists?

north and south until in effect it ruled from Thermopylae to the Hellespont, than hopeful of profit from its new prosperity. As producers of food and raw materials they had to compete with Macedonia, and could find no market there. Purchasers for their products could be found more readily in populous industrial cities like Athens.

Furthermore, one cause of their hostility to Athens had been removed when Philip captured Amphipolis. Their fear had also disappeared with the loss of strength suffered by Athens since 357. Conditions had changed since the Macedonian alliance was made. Then the two powers, the Chalcidic League and the Macedonian kingdom, were almost equal, and combined for mutual protection against Athens. Now only a change of front could preserve the balance of power, for Philip was many times stronger than his ally, and could crush her if he so desired. So the Nationalist party must have argued in 352 when the Chalcidians decided to make peace with Athens in direct contravention of their alliance with Philip.⁸⁶

The Nationalists were not long in power. After a hint from Philip,⁸⁷ the Macedonian party gained control of the government again. In 351 a Nationalist leader Apollonides was exiled,⁸⁸ and for about two years all went well. Then when Philip demanded the return of his fugitive brother, as though he had a right to interfere in the internal affairs of the Chalcidic state,⁸⁹

⁸⁶ Dem., iii. 7; vi. 20; xxiii. 108 f.; Libanios on Dem., i.; Diod., xvi. 8.

⁸⁷ Dem., i. 13; iv. 17; cf. Theop., frg. 124.

⁸⁸ Dem., ix. 56, 63-6; lix. 91.

⁸⁹ Justinus, viii. 3, 10; Schol., Dem., i. 5.

the Nationalists persuaded their fellow citizens to take decisive action. They appealed to Athens for support. Even now the Nationalist party was not in full control, for certain cities where Philip's supporters were strong surrendered without a struggle,⁹⁰ and members of the pro-Macedonian party, who had been chosen to important military commands, allowed Philip to capture a large part of the Chalcidian cavalry.⁹¹ With this evidence of treachery at home the resistance of Olynthos rapidly crumbled, and the city was captured in the autumn of 348.

The Pan-Macedonian system, which had begun so auspiciously a few years before as a co-operative enterprise, was now, by force of arms, completely realized, although probably not in accordance with the plans Philip had formulated in 357. Philip's economic propaganda had borne fruit. His imitation of the Chalcidian coins had served first to win the merchants to his side and then to break the force of Chalcidian resistance.

In view of these well-known diplomatic successes, inexplicable by bribery alone, it is hardly necessary to look for ulterior motives, or to ascribe to Philip an intentional bimetallism. Since it was enough for him that a better, more attractive, and more popular currency should help to gain political power and added territory for Macedonia, numismatists should be content with an explanation of his actions that disposes of all the difficulties inherent in the bimetallic hypothesis.

⁹⁰ Diod., xvi. 52, 9; Dem., xix. 266.

⁹¹ Dem., ix. 66; xix. 266-7.

Having seen how naturally Philip's monetary reforms fit into the scheme of his foreign policy as it gradually develops, it is unnecessary to continue the discussion further. Our conclusions may be stated as follows. When Philip became king about 357 in place of his nephew, his plans included a breach with Athens and an economic-political alliance with his Chalcidian neighbours. To facilitate trade he adopted their standard for his new issue of silver coins, without regard at all to the value of gold. Finally, in 348 or 344, when his plans had matured, perhaps even as early as 352, Philip deprived Philippi of its mint privileges, and began to issue gold staters on the convenient Attic standard of the Philippian and Chalcidian coins. His gold obols, and other fractional coins, if issued at this time, should be considered as nothing more than convenient and customary divisions of the Attic standard he had adopted, not as proof of a carefully considered bimetallic policy.

ALLEN B. WEST.

IX.

GREEK COINS ACQUIRED BY THE BRITISH MUSEUM IN 1922.

[SEE PLATES IX, X.]

FROM the present report I have, as usual, omitted coins likely to be published before long in the official catalogue; also the Graeco-Indian coins, from the Whitehead Collection, the outstanding specimens from which will, I hope, be dealt with by Mr. Whitehead himself. In preparing the description I have received so much valuable assistance from Mr. Robinson that I make my acknowledgements to him once for all.

Syracuse.

1. *Obv.*—[ΞΥ PA KO Ξ]ΩΝ in arc below. Head of Arethusa l., crowned with water-plant, wearing triple-drop ear-ring and necklace; around, four dolphins; border of dots.

Rev.—Four-horse chariot l., the horses in perfect step, driven by charioteer who holds goad horizontally; above, Nike flying r., holding out wreath to crown him; the whole group on a basis, the cornice of which is represented by the exergual line; ranged on steps of the basis, shield, greave, cuirass, greave and crested helmet; above the shield, ΑΘΛΑ. Border of dots.

- R.* ↑ 35 mm. Wt. 42.75 grms. [Pl. IX.] Presented by Mr. Edward Philips Thompson of Whitechurch, Salop.

This¹ is the already well-known specimen of the

¹ Ashburnham Sale (6 May 1895), lot 53; Burlington Fine Arts Club, *Exhibition of Greek Art* (1903), p. 156, No. 432, Pl. cv; Hill, *Coins of Ancient Sicily*, p. 103, Frontispiece, No. 7.

famous decadrachm by the "New Artist", which was in the Ashburnham Collection, from which it passed to that of the Rev. S. A. Thompson-Yates. After the death of Mr. Thompson-Yates it was acquired by his brother, through whose generosity it has now found a resting-place in the British Museum.

It is unnecessary here to dwell on its importance. It is from the same dies as the magnificent specimen—the only other known—now in the Jameson Collection, which was first published by Sir Arthur Evans,² but it is less successfully centred and struck, and shows but little of the inscription, besides being slightly double-struck on the obverse. On the other hand, it has escaped the corrosion which has pitted the upper part of the reverse of the Jameson specimen. It shows absolutely no trace on the reverse of the vertical ridge starting from the exergue just above the letter Λ. This ridge, therefore, which suggests the edge of a building, must be due to a flaw in the die,³ and we may assume that the Jameson specimen was struck after the other one. It is unfortunate that the portion of the exergue, on which Sir Arthur thought he could see traces of an artist's signature, is off the flan of our specimen.

Sir Arthur has made it abundantly clear that the coin cannot be from the hand of Euainetos. But on the question of the place in the series of decadrachms which it must occupy, his arguments, intended to show that it comes between Kimon and Euainetos, do not

² *Num. Chron.*, 1891, pp. 231 ff.

³ Not to a radiation in striking, for such radiations (of which many are visible on our specimens) always start from the relief and taper away into the background.

seem to me to be quite convincing. The head of Arethusa is of an altogether more sophisticated type; with all its brilliance it lacks the freshness of the work of Euainetos, is more academic. It has certain features which look like corrections, or "improvements" on an earlier design. The inscription, as Sir Arthur has noted, is placed in an arc below, instead of among the hair, so that more room is left for the development of the luxuriance of the nymph's tresses. On the reverse the horses are in perfect step; the only fault to be found with the composition is that the distance between the fore and hind legs of the foremost (off) horse seems too small—a fault which the group shares with Euainetos's design. But the most remarkable modification is in the placing of the word ΑΘΛΑ in a safe position where it could not, as too often in all the other designs by Kimon and Euainetos, escape off the flan. Finally, I may mention a fact which has not, I believe, been noticed before; both the extant specimens are apparently struck from fixed dies (i.e. $\uparrow \uparrow$), whereas regularity of this kind is the exception in coins of Kimon's and Euainetos's types. Out of seven decadrachms by Kimon under my hand, one is \downarrow , three \rightarrow , the rest anyhow; out of eighteen of the types of Euainetos, signed or unsigned, two are \uparrow , three \downarrow , six \rightarrow or \leftarrow , and seven anyhow. That the only two extant specimens of a variety should be struck \uparrow indicates that special care was taken. It cannot be regarded as a proof of late date (although an examination of later fourth-century coinages of Syracuse suggests that rather more care was taken in this matter than in earlier times); but in conjunction with the other signs of elaboration it makes it easier

to think of it as the last rather than an intermediate stage in the development of the decadrachm.⁴ Such modifications—improvements, if you will—as the New Artist introduced would not have been discarded in favour of the older type of reverse. I think we shall not be far wrong in dating the New Artist not long before 360.

Orrhesii.

2. *Obv.*—**PO** above, **H** to l., of bull kneeling l. Border of large dots.

Rev.—Quadripartite incuse square.

R. 11.5 mm. *Wt.* 0.67 grm. [*Pl. IX.*] From the Sir Hermann Weber Collection.⁵ Bought from Macridi, 1892.

Too heavy for an obol, according to Babelon's estimate of the diobol at 1.21 grm. (*Traité*, II. i, p. 1061) and too light for a trihemiochol. But it is probable that the weights of these small coins were not carefully regulated, and that they merely served as make-weights.

Bisaltæ.

3. *Obv.*—Nude man, wearing petasos, standing r. beside his horse, holding two spears; above the horse's tail, a crane r. Border of dots.

Rev.—Shallow quadripartite incuse square.

R. 19 mm. *Wt.* 4.21 grm. [*Pl. IX.*] (H. Weber; bought of Macridi.)

4. *Obv.*—Similar, but the man turns his head to l., there is no crane, but a large pellet in field r.

⁴ As I have hinted in the second edition of Head's *Historia Numorum*, p. 177.

⁵ Coins from this collection are in future indicated simply by "H. Weber". The acquisition of the selection made by the Museum has now been completed.

Rev.—Similar reverse.

R. 18 mm. Wt. 4.04 grm. [Pl. IX.] (H. Weber; bought of Lambros, 1888.)

Svoronos (*Journ. Int.*, xix, p. 108, No. 15, Pl. xi, No. 17) has published a drachm at Munich so closely resembling this that I think it must be from the same obverse die. However, what appears as a globule on our specimen seems to be an annulet on that at Munich, possibly owing to its not being fully struck up.

Mende.

5. *Obv.*—Ass walking r.; reclining on its back, bearded Dionysos, lower limbs clad in woolly himation, which is also spread on animal's back; his head, which is wreathed in ivy, is turned three-quarters r.; he holds kantharos in r. Border of dots. Exergue marked by two plain and one faint dotted lines.

Rev.—MEN/ΔA/IO/N within shallow incuse square surrounding a square panel, which is itself divided into four squares, the sides and diameters ornamented with studs.

R. ↑ 27 mm. Wt. 17.19 grm. [Pl. IX.]

A good specimen from the famous find of Mendæan tetradrachms.⁶

⁶ I have seen casts of five other specimens, and all are from the same pair of dies (A, a). One is in the Paris collection (Babelon, *Rev. Num.*, 1922, Pl. v, No. 12), one in Mr. Jameson's, one in Mr. Newell's. The same obverse die (A) was used for some of the pieces with the four palmettes on the reverse (b, Mr. Jameson); but not for all, for the Paris specimen (*ibid.*, Pl. v. 10) is from a different though closely similar obverse die (B). The former die is usually distinguishable by the horizontal radiations in the region of the forelegs of the animal, and by a different treatment of his ears (the right ear is drawn further back than the left). The second die (B) is also used with *rev.* vine in square (c, Mr. Gulbenkian), and also with *rev.* vine not enclosed in square (d, in the market).

I do not propose to add to the various conjectures about the meaning of the reverse—plan of temple, door, coffer, tabernacle, lacunar, &c.—but the last seems the most probable, although the lack of decoration of the small square is against it. The date given by Dr. Regling for the cessation of the Attic tetradrachms of Mende (405 B.C.) seems, in view of the style of the later issues, more acceptable than the theory that they came to an end with the revolt of Mende on the appearance of Brasidas and its recapture by Nicias.

Alexander the Great.


6. *Obv.*—Head of Athena r. in crested helmet; on the bowl, sphinx with straight wing springing r.; hair in ringlets.

Rev.—ΑΛΕΞΑΝΔΡΟΥ on r. downwards, ΒΑΣΙΛΕΩΣ in exergue. Nike standing l. holding standard and wreath; in field l. head of horned horse l., ΕΒ and ΤΙ. Concave field.

N. ← 17.5 mm. Wt. 8.57 grm. [Pl. IX.] Horace Sandars Memorial Family Gift.

A stater of the Babylonian series; cp. the tetradrachm with horse's head, BE, wreath and small Boeotian shield (?), Müller 1485. The sphinx as decoration of the helmet is rare. Müller (p. 3) mentions it on his No. 1562, but does not describe its attitude. I find it *seated* on three other staters which were not

The vine-in-square die (c) is found combined with another obverse (C, grasshopper in exergue), and this again with others. The die with the vine not enclosed in a square (d) is also found combined with yet another obverse die, with Dionysos's head $\frac{1}{4}$ r. (Philipsen, 385). I am glad to learn that Mr. Noe is engaged on an exhaustive study of the dies represented in the find with a view to working out the sequence of the issues. This has not been attempted by Dr. Regling in his otherwise very thorough study of the whole coinage of Mende (*Z. f. N.*, xxxiv. 1923, pp. 7–35), the proofs of which he kindly allowed me to consult before publication.

known to Müller: (a) Φ before, \mathbf{M} behind Nike; (b) Babylon mint, \mathbf{M} below ; (c) Babylon mint, \mathbf{AY}^{6a} before, bee behind Nike. (These are all in the British Museum.) Also Hirsch, xvi. 376 (obscure monogram l, \mathbf{M} r.; the reference to Müller 696 is wrong.) There is also a sphinx couchant on a stater with no visible symbol (Pozzi 864).

Macedonia under the Romans.

7. *Obv.*—Head of young Heracles r. in lion-skin.

Rev.— \mathbf{AAE} above $\mathbf{ZANAPOV}$ in exergue. Lion walking r.

R. \downarrow 10 mm. Wt. 0.78 grm. [Pl. IX.] (H. Weber; bought of W. T. Ready.)

A variety of the little pieces of the third century A.D. described by Gaebler (*Makedonia und Paionia*, i, p. 196, Nos. 895–8).

Aenus.

8. *Obv.*—Head of Hermes r., in petasos (same die as *Berlin Corpus*, No. 269, Taf. iv. 6).

Rev.— \mathbf{AIMI} above goat walking r.; in field r., astragalos (different die from any illustrated specimen of *Corpus*, No. 269). Incuse square.

R. \rightarrow 28 mm. Wt. 14.88 grm. [Pl. IX.] From a Bulgarian dealer.

This coin is over-struck on a coin of Abdera; the head of the gryphon and the letter \mathbf{O} are clearly visible on the petasos of Hermes, and the cock-symbol before its feet is seen behind his neck. The Abdera coin was, therefore, similar to *Corpus*, No. 19, with the cock to l.; but it was not from the same die as the Hunter

^{6a} So, and not \mathbf{AY} , apparently, both on this and on the stater Müller 1270; but the cross-bar may be a flaw.

specimen (of the others, which are not illustrated anywhere, I cannot speak).

These coins of Abdera are dated by the *Corpus* in the period 512-478 B.C. The coins of Aenus are given to the period 478-450 B.C. The former are on the so-called Phoenician standard (our coin is of exactly the average weight, as deduced by the authors of the *Corpus*, p. 38); but Aenus used a rather low Attic weight (average in the period concerned 16.46 grm., *Corpus*, p. 150). The restruck coin was therefore much too low for the Aenus currency: but whether the use of an old coin of inadequate weight as a blank was due to carelessness or deliberation it is not possible to say.

Dicaea in Thrace.

9. *Obv.*—Head of Heracles r., bearded, in lion-skin.

Rev.—Incuse square partly blocked up.

R. 12.5 mm. Wt. 2.85 grm. [Pl. IX.] (H. Weber; bought from W. T. Ready, 1890.)

The tetrobol of the stater, *Traité*, 1763.

Lysimachus.

10. Gold stater of Byzantium with the monogram



corresponding to the tetradrachm, Müller 231. Sandars Memorial Family Gift.

A. ↑ 20 mm. Wt. 8.48 grm.

11. *Obv.*—Gold stater of Tyra. Head of Alexander r., diademed, with ram's horn, from a much worn die.

Rev.—Usual type and inscr.; on seat of Athena TY; in ex. trident l.; in field l.



A. 20 mm. Wt. 8.38 grm. [Pl. IX.] Horace Sandars Bequest.

12. Gold stater of Callatis.

As Müller 266, *N.* \uparrow 19 mm. Wt. 8.26 grm. The letters on the seat seem to be KA.

Hymnus, King of Scythia (?).

13. *Obv.*—Head of Apollo r. laureate. Border of dots.

Rev.—BACIA on r. downwards, VMNO on l. downwards. Cornucopiae.

R. base \uparrow 16 mm. Wt. 1.38 grm. [Pl. IX.]
(H. Weber.)

A specimen of this coin, which Mr. Robinson found among the unattributed coins at Paris, shows the right arm of the V in the king's name plainly, and gives a suggestion of the left arm. There appears to be no room for any letter to the left of the V, so that any restoration such as TVMNO is out of court. One Hymnus, son of Scythas of Chersonese, was honoured with proxenia by the Delphians in 195–4 B.C.—a date not very far removed from that of our coin. The name was evidently common at Chersonesus.⁷ The style of the coin, such as it is, offers no objection to the attribution to Scythia.

Larisa Thessaliae.

14. *Obv.*—Head of nymph facing, of the usual type, very slightly inclined to l. Border of dots.

⁷ Minns, *Scythians and Greeks*, p. 517, quoting Dittenberger, *Syll.*², 268 (= ² 585. 9). For a local inscription referring to the same man, see Latyshev, *Inscr. Or. Sept. Pont. Eux.*, iv (1901), No. 80, p. 55. There is an earlier Hymnus (father of Sopolis, who, according to an amphora handle, was astynomos of Chersonesus at the end of the fourth or beginning of the third century; a tombstone recording probably the same man was found at that place; Latyshev, i (2nd ed., 1916), p. 435, No. 494). The name is also to be read with certainty on a coin of Chersonesus of the early 3rd cent. (Naville, *Auction-Catal.*, v, 1923, No. 1587).

Rev.—**ΛΑΠΙ** above. Horse l., head to ground, about to lie down; bridle trailing off into the exergue; growing under its belly, a small plant; in ex. **ΠΛΕΙ Ν**

R. ↘ 20 mm. Wt. 5.97 grm. [Pl. IX.] (H. Weber; from the Thomas Jones Collection; Sotheby's, 28, vi, 1887, lot 325.)

A similar coin is described by Mionnet (*Suppl.*, iii, p. 293, No. 192); and a closely similar reverse type (from a different die) is attached to the profile obverse of the coin in the Hirsch Sale, XVI, lot 399. I am not sure whether the letter which looks like **N** (the right-hand stroke is off the flan) is part of the original word (the long interval between it and the **l**, and the absence of an **N** in the coins described by Hirsch and Mionnet, are against this) or due to some accident in striking.

Astacus Acarnaniae.

15. *Obv.*—Free horse prancing r.

Rev.—**ΑΣΤΑ** on l. upwards. Cupping-glass, with ring at point; in field r., forceps.

R. ← 10.5 mm. Wt. 0.66 grm. [Pl. IX.] (H. Weber; bought of Kondylis, 1907.)

M. Babelon has already published^{*} a fourth-century silver coin which he identifies as an obol of the Corinthian standard struck at Astacus in Acarnania. Like our piece it has a cupping-glass on the reverse, but the adjunct is a scalpel. The obverse type is a head of Asklepios. Its weight is 0.475 grm.: if it is a Corinthian obol, ours is a trihemiobol.

^{*} *Rev. Et. Gr.*, 1921, pp. 10-15; cp. *Rev. Num.*, 1921, p. 204. The piece, which was in the Pozzi Collection, does not appear in the Sale Catalogue.

A cupping-glass accompanied by a pair of forceps of the usual shape appears on a gem which was in the Pozzi Collection.⁹ On our coin the instrument has curved jaws and very short handles.

Phlius.

16. *Obv.*—Bull kneeling r. on r. fore-leg, head reverted; dotted exergual line.

Rev.—Large Φ in dotted incuse square.

R. 13 mm. Wt. 2.24 grm. [Pl. IX.] (H. Weber; bought of Lincoln, 1889.)

This hemidrachm seems to me to be of much earlier style than the well-known coins on which the bull is walking or charging, and which Babelon (*Traité*, II, iii, 508 f.) makes begin about 431. Dr. Regling informs me that the Berlin coin (Fox, *Engravings*, i, Pl. viii, No. 94), and a better specimen from the Imhoof Collection, show a girdle of dots round the bull's body (of which there is possibly a trace on our coin), as well as dotted exergual line; the incuse of the reverse is dotted, and, as on later coins, there are globules in the corners. In style these are obviously earlier than those with the bull's head not reverted, though that they are as early as 470, as I had judged, he will not maintain.

Elis.

17. *Obv.*—Head of Zeus r. laureate.

Rev.— \times ; above eagle r.; to l. and r. \sum $\frac{1}{\Omega}$; below, FA, all in wreath. Concave field.

R. \uparrow 15 mm. Wt. 2.35 grm. Clerk, *Coins of the Achaean League*, p. 15, No. 229, Pl. ix, No. 1. Presented by Sir Charles Oman, K.B.E.

⁹ C. P. J. Lambros, *Περὶ σικυῶν καὶ σικυάσεως* (Athens, 1895), p. 15, fig. 41.

Melos.

18. *Obv.*—Quince on stalk [with two buds]. Border of dots, mostly off the flan (? same die as *Num. Chron.*, 1914, Pl. vii, No. 15).

Rev.—[M] A Λ[I] (reading outwardly) in the intervals of a triskeles of human legs, the male sex being indicated; border of dots in incuse circle. (Same die as *Traité*, Pl. CCXLII, No. 6; *Rev. Num.*, 1909, Pl. vi, No. 25.)

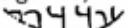
R. 22.5 mm. Wt. 14.07 grm. From the Mathey Sale, Paris, 19, xi, 1921, lot 137 (illustrated).

The form of the M (which is seen on the Jameson specimen) shows that this is one of the later issues of the fifth-century series. M. Babelon, in his *Traité*, does not, however, divide the series into two groups on the basis of the epigraphic difference noted by M. Jameson.

The members of the symbol on the reverse are, as already noted, treated realistically; it is in keeping with this that the circular boss in the centre, a relic of the solar disk (if the symbol is of solar origin), has disappeared.

Sinope.

19. *Obv.*—Head of nymph I., hair in sphendone, wearing ear-ring and necklace; in front, aphilaston. Border of dots.

Rev.—Eagle l., beating wings, on dolphin; below
 concave field.

R. → 20 mm. Wt. 4.90 grm. [Pl. IX.] (H. Weber.)

The name is perhaps the same as that on the coin published by Six, *Num. Chron.*, 1885, p. 26, No. 37, Pl. ii, No. 8, on which, however, only four letters are legible.

Abydos.

20. *Obv.*—Head of Apollo r. laureate, with long hair.


Rev.—Eagle standing r., wings closed, on l. [Δ]ΙΟ-ΓΕΝΗ[Ξ] upwards; on r. ΑΒΥ upwards, above which, bunch of grapes.

℞. ← 14 mm. Wt. 3.81 grm. [Pl. IX.]

Another of the Rhodian drachms of the period c. 400–338 B.C. to which Mr. Robinson has recently called attention.¹⁰ There does not seem to be anything under the eagle's feet, as on the other coin of Diogenes.

Alexandria Troas.

21. *Obv.*—Head of Apollo l., laureate.

Rev.—ΑΠΟΛΛΩΝΟΣ on r. downwards, ΙΜΙΘΕΩΣ on l. downwards; in ex. ΑΛΕΞΑΝΔΡΕΩΝ|ΑΡΙΣΤΟΥ in two lines. Apollo Smintheus walking r., as usual, holding bow in l., r. extended; in field r., date ΣΚ downwards, l. 

℞. ↑ 32.5 mm. Wt. 16.77 grm. [Pl. IX.] From a Smyrna dealer.

The coin, which dates from 81 B.C., is from the same dies on both sides as the Pozzi specimen (lot 2267), but the latter was the earlier struck, since on it the flaw which extends from Apollo's right hand is not so far developed as on ours. The same obverse die was used by Aristos's successor next year (221), Philitas, and also, in a very worn state, by Nikandros two years later (223).¹¹ Similarly, for the drachms, Herodikos in


¹⁰ *Num. Chron.*, 1921, p. 11. Incidentally it corrects his reading of the magistrate's name, which is not ΜΕΝΗΞ but ΔΙΟΓΕΝΗΞ.

¹¹ See H. von Fritze's study of the development of this coinage in *Nomisma*, vi, pp. 28 ff.

year 221 (= 80 B. C.) and Archipylos¹² in year 223 use the same obverse die.

Tenedos.

22. *Obv.*—Janiform head, male and female, of the usual type.


Rev.—ΤΕΝΕΔΙΩΝ above double axe; in field l.  and bunch of grapes, r. cultus-figure facing, bearded and wreathed, both arms wrapped in cloak or skin of animal, ends of which hang down on r. (Dionysos in nebris?). All in wreath.

Æ. ↑ 29 mm. Wt. 16.43 grm. [Pl. IX.] From a Smyrna dealer.

One of the later series of tetradrachms (after 200 B. C.), but not among the latest, as its comparatively small diameter shows.

Cyme.

23. *Obv.*—Α[ΥΤΟΚΡΑΤ]ΩΡΝΕΡΩΝΑC ΚΑΙCΑΡ CΕ ΒΑCΤΩC around, beginning on l. below. Unclothed bust of Nerva r., laureate.

Rev.—ΑΙΟΛΕΩΝΚΑ ΙCΑ ΡΕΩΝΚΥΜΑΙΩΝ around, beginning on l. below. Temple showing two columns (with caryatid capitals); within, facing cultus statue of goddess of Ephesian Artemis type (polos head-dress and fillets depending from hands, but no stags). Across field, AC 

Æ. ↑ 33 mm. Wt. 28.10 grm. [Pl. X.]

The title Caesarea has already been recorded for Cyme as occurring on coins of Nero,¹³ and was doubtless

¹² So I read the name on the British Museum drachm, *Num. Chron.*, 1898, p. 109, No. 21. ΧΙΠΥΛΟ is certain, and I seem to see traces of the upper part of a P before the X. The form Archipylos is attested as a variant reading for the name of the philosopher recorded as Anchipylos.

¹³ Head-Svoronos, ii, p. 89; it has escaped the second English

taken by the city at the time of the restoration with imperial assistance after the earthquake of 17 B.C. Later, Hadrian was honoured as *Ktistes*.¹⁴

Although the numeral in the r. field is not very clear, it can hardly be anything but a Γ with a horizontal stroke above it. Cyme must be added to the list of cities where marks of value in assaria appear on the coins; it is also one of the earliest to use such marks.¹⁵

Lesbos.

24. *Obv.*—Forepart of winged boar r.

Rev.—Incuse head of bearded Heracles r. in lion-skin; behind, small square incuse.

EL. → 10 mm. Wt. 2.49 gm. [Pl. X.] From a Smyrna dealer.

Normally the Heracles head on this series is associated with other obverses: ram's head, gorgoneion, forepart of horse. The small incuse square behind the head seems to correspond to the projection (sometimes double) which is seen behind the types such as the lion's head or calf's head or other incuse coins of the series. It is perhaps a degeneration of the large incuse of the reverse of ordinary single-type coins.

Mytilene.

25. *Obv.*—ΑΥΤΚΑΙΜΑΥ[P .ΑΝΤΩΝΕΙΝ - -] Bust of Elagabalus r., laur., in paludamentum and cuirass.

edition of Head, and also the article Kyme in Pauly-Wissowa, but is recorded in the last work under Kaisareia.

¹⁴ *B. C. H.*, xii (1888), p. 365.

¹⁵ Signorina Cesano (*Analecta Numismatica*, in *Ann. Scuola Arch. di Atene*, iii, 1921, pp. 161 ff.) gives the completest list up to date, and makes them begin in the time of Hadrian. But coins of Chios marked one ΑΣΣΑΡΙΟΝ are as early as the time of Augustus: see Mavrogordato, *Chron. of the Coins of Chios*, pp. 258-9; *Num. Chron.*, 1918, pp. 6-7.

Rev.—ANNIAVPH ΦΑΥCΤΕΙΝΑ Bust of Annia Faustina r., placed on exergual line, below which ΜΥΤΙΑΗΝΑ|ΙΩΝ

Æ. ↓ 35 mm. Wt. 24.01 grm. [Pl. X.] Cp. *Invent. Waddington*, 1401.

This coin appears to be the only authority for Aurelia as the second name of the wife of Elagabalus.

Ionian Electrum.

26. *Obv.*—Head of horse r., with bit (?) in its mouth.

Rev.—Incuse square containing a cross, the arms of which are decorated each with two cross-bars; in centre a small cross; in each angle a pellet.

EL. 7 mm. Wt. 0.57 grm. [Pl. IX.] (H. Weber; purchased in 1900 from Wiedemann of Smyrna.)

This is a "Phoenician" or "Milesian" $\frac{1}{24}$ stater. It belongs to the same series as a sixth already published.¹⁶ The style is quite different from that of the other electrum pieces with a horse's head.¹⁷ It is also not quite certain whether it belongs to the same set as the thirds and stater associated with the sixth by Babelon.¹⁸

The two small protuberances on either side of the muzzle of the beast (which, as the larger denomination shows, is a Pegasus) may be the ends of a bit.

Magnesia ad Maeandrum.

27. *Obv.*—Lancer riding r. (usual type).

Rev.—ΜΑΓΝ above humped bull charging l.; in ex. ΠΟΛΕΜΑ|ΑΠΟΛΛ in two lines; all in Maeander border.

Æ. ↑ 19 mm. Wt. 5.53 grm. From Smyrna.

¹⁶ *Traité*, Pl. ii. 26; another specimen, also bought by Weber from Wiedemann, was acquired by the Museum in 1919.

¹⁷ B.M.C. *Ionian*, p. 10, No. 47; p. 11, Nos. 53, 55.

¹⁸ *Traité*, Pl. ii, Nos. 24, 25. Another example of the third: *Num. Chron.*, 1914, p. 103, Pl. viii. 1.

A new magistrate. I have already mentioned in my last report that double sigloi of *Ἐπικράτης Διαγόρου* and *Μανδρόδαρος Μιννίωνος* (weights 10.05 grm. and 10.19 grm. respectively) have been acquired.

Miletus.

28. Prof. J. L. Myres has presented a selection of bronze coins of the types: Cultus-statue of Apollo Didymeus, *rev.* Lion recumbent r. (B.M.C., *Ionía*, p. 197, Nos. 134-7). They were part of a large hoard found in Calymnos. The little selection is interesting as showing that many of these coins are struck on coins of the older series with the head of Apollo. Each coin has a monogram in the r. field of the reverse.¹⁹

The magistrates now known to have issued coins of this series are—(1) *Αίσχυλῖνος*, (2) *Αὐτοκράτης* (Wadd., 1852), (3) *Βασιλείδης*, (4) *Εὐδημος*, (5) *Ζώπυρος*, (6) *Μενέστρατος*, (7) *Σώστρατος* (Wadd., 1856). It is noticeable that four out of these seven (Nos. 1, 3, 5, and 7) also issued coins with the facing head of Apollo on the obverse and the lion with one or two stars on the reverse (B.M.C., Nos. 103-11). It would seem accordingly that this latter group should not be so far removed from the group with the standing Apollo as it is in B.M.C., *Ionía*.

Halicarnassus.

29. *Obv.*—Head of Apollo r., laureate, long locks on neck.

Rev.—ΑΛΙΚΑΡ on l. upwards, ΝΑΣΣΕΩΝ on r. upwards. Kithara; above, divided by the horns, ΜΥΣ; below, ΠΑΝΑ


Al. ↑ 16. mm. Wt. 2.17 grm. [Pl. X.] (H. Weber; acquired from Mr. W. R. Paton of Cos.)

¹⁹ Always present, though often rather illegible, and hence not noticed in B.M. Catalogue.

The half-drachm of the first century B.C. is to be classed with B.M.C., *Caria*, p. 107, No. 48, which, however, has no magistrate's name. The natural way to read the name here is **ΜΥΣ ΠΑΝΑ**, Mys the son of Panas. Both names are common, especially in Egypt; and Herodotus (viii. 133 f.) has made us familiar with the Carian Mys from Euromus. In view of this, the temptation to read *Παναμύς* and regard it as a late by-form of the earlier Halicarnassian name *Παναμύης*²⁰ must be resisted.

Stratonicea Cariae.

30. *Obv.*—Head of Zeus r., laur.

Rev.—**CTPA**
 above eagle standing r., wings open; in field r. an insect (?). All in shallow incuse square.

R. ↑ 11 mm. Wt. 0.76 grm. [Pl. X.] (H. Weber; bought from Mr. W. R. Paton of Cos, 1905.)

The trihemionbol of the series B.M.C., *Caria*, p. 147, Nos. 1-5.

31. *Obv.*—Head of Hecate r., laureate, crescent on top of head, two long locks on neck.

Rev.—**ΑΠΕΛΛΗC** above Nike advancing r. with wreath in r., palm over l. shoulder, in field l. **C**, r. **T** and star. All in shallow incuse square.

R. ↑ 15 mm. Wt. 1.91 grm. Broken and mended.

32. *Obv.*—Similar.

Rev.—Similar type; above and on r. **MENEΛΑ/OC**; in field l. **C**, r. **T** and torch.

R. ↑ 15 mm. Wt. 1.79 grm. (H. Weber; bought of Lambros, 1884.)

²⁰ Collitz-Bechtel, 5726-7; Hicks and Hill, *Gk. Hist. Inscr.*, 27. There are also various Egypto-Greek names approximating to it: *Παναμύς*, *Παναμύς*, &c., but the resemblance is, of course, fortuitous.

These coins belong to the series B.M.C., Nos. 7, 8; cp. Imhoof, *Kleinas. Münz.*, p. 153, where the name Menelaos is recorded on a coin of the Zeus-Eagle series.

Apamea Phrygiae.

33. *Obv.*—Head of Zeus r., laur.

Rev.—ΑΠΑΜ - - on r. downwards, ΚΑΝΚΑ|ΕΓΛΟ in two lines on l. downwards. Veiled cultus-figure of Artemis Anaitis.

Æ. ↑ 23 mm. Wt. 13.44 grm. Presented by Prof. W. M. Calder.

The first name, as shown by Münsterberg,²¹ is Kankaros, the second probably the title *Ἐγλογιστής*.

Lycia.

34. Ziban. The tetrobol from the Weber Collection (B.M.C., *Lycia*, Pl. xlv, No. 3) has been acquired by the Museum. It is not possible to separate this coin, so far as the inscription is concerned, from those with the dolphin type (Babelon, *Traité*, 202 ff.). Mr. Arkwright has shown²² that the letter which has generally been transliterated *th* is really a sibilant, and that the inscription represents the Greek place-name Simena.

Lycia. Uninscribed, fifth cent.

35. *Obv.*—Type indecipherable (struck from a worn die). Perhaps forepart of boar.

Rev.—Bull walking l.; above, triskeles turning r. All in dotted incuse square.

Æ. 20 mm. Wt. 8.62 grm. [Pl. X.] From Smyrna.

²¹ *Oesterr. Jahresh.*, xviii, Beibl. 311.

²² *J. H. S.*, xxxv (1915), p. 100.

Balbura Lyciae.

36. *Obv.*—Head of Heracles r., bearded; behind shoulder, club. Border of dots.

Rev.—ΒΑΛΒΟΥ on r. upwards; eagle with open wings standing r. on winged thunderbolt.

Æ. → 14.5 mm. Wt. 2.99 grm. From Smyrna.

First century B.C. For other Heracles types at Balbura, see B.M.C., *Lycia*, p. lxix.

Olympus Lyciae.

37. *Obv.*—Head of Athena r. in crested Corinthian helmet.

Rev.—ΟΛΥΜΠΙ ΑΝΩΝ in two lines above and below wingless thunderbolt.

Æ. ↑ 16 mm. Wt. 3.27 grm. From Smyrna.

Probably first century B.C. Athena and the thunderbolt (but winged) are already known as types of this city²³ on slightly later coins. The normal form of the ethnic is, however, 'Ολυμπηῶν.²⁴

Telmessus.

38. *Obv.*—Head of Augustus r., bare. Linear border.

Rev.—Within a broad wreath, enclosed between two plain circles, kithara; in field r. and l. $\begin{matrix} K & P \\ TE & A \end{matrix}$

Æ. ↑ 36.5 mm. Wt. 25.45 grm. (before cleaning), 25.27 grm. (after cleaning). [Pl. X.]

This piece generally resembles the "medallion" of Masicytes (B.M.C., *Masicytes*, No. 38) in style, weight, size, and die-position (the Masicytes coin weighs 25.52 grm., and measures 9 mm.). But there is a

²³ Babelon, *Rev. Num.*, 1893, p. 334, No. 15; Imhoof, *KL M.*, p. 307, No. 1. The inscription is circular.

²⁴ Cp. the variants 'Ολυμπηνοί (Steph. Byz.), Οὐλυμπεῖνοί (Herodotus) for the ethnic of the Mysian Olympus.

slight difference in the treatment of the bust. The Masicytes coin has already been used by Laffranchi²⁵ to fix the attribution of certain Roman coins to Lycia. The bust on it has been said closely to resemble that on the sestertii, reading **IMP AVGVST TR POT** and **OB CIVIS SERVATOS**,²⁶ but I must confess that the closeness seems to me to be exaggerated. The bust on our new coin, on the other hand, is really close to the sestertii with the much-discussed letters **CA**²⁷; and it will be observed that the arrangement of the reverse, with type inside a wreath contained within two circles, is the same in both coins. Whether the Roman coins were issued in Lycia, as Laffranchi supposes, or the Lycian coins copied from Roman coins struck in some mint of the Province of Asia, as seems more probable, is a question not yet to be decided.

Side.

39. *Obv.*—Head of Athena r. in crested Corinthian helmet, on bowl of which obscure countermark.

Rev.—Nike walking l. holding out wreath; in field l. pomegranate, below which **AΦ**.

AR. ↑ 27.5 mm. Wt. 16.56 grm. From the Horacè Sandars Family Memorial Gift.

The magistrate's signature **AΦ** appears to be unpublished.

Tarsus. Mazaeus.

40. *Obv.*—Baaltars seated l., feet on footstool, head facing; holds in r. bunch of grapes, ear of corn and

²⁵ *Riv. Ital.*, xxix, 1916, p. 294 f.

²⁶ Grueber, *B.M.C. Rom. Rep.*, Pl. cxix. 14. Mattingly, *B.M.C. Rom. Imp.*, Pl. 21. 8. The head on the Lycian coin is perhaps a little broader than on the Roman.

²⁷ Grueber, Pl. cxviii. 1; Mattingly, Pl. 21. 6.

eagle; l. rests on sceptre; on r., upwards, his name in Aramaic; beneath throne, \mathfrak{w} ; in field l. \mathfrak{n} . Border of dots.

Rev.—Lion l. bringing down bull, on whose haunch, \mathfrak{w} ; above, \mathfrak{w} ; below, \mathfrak{z} (of a different form). Plain border. Chisel-cut.

R. \leftarrow 23.5 mm. Wt. 10.95 grm. [Pl. X.] (H. Weber; presented by the late Sir Henry Howorth.)

A variety of the Persic stater of Mazaeus, before 333 B.C., when the Alexandrine tetradrachms were introduced (Newell, *Am. Journ. Num.*, lii, 1918, p. 72). A similar coin from different dies was in the Sandeman Sale, lot 249 (ex Amateur, 1905, lot 237). Probably also the Delbeke coin, lot 214, and the Walcher de Molthein specimen, lot 2631, are similar, though on the former the \mathfrak{n} in the field of the reverse is hardly legible, and on the latter, if (as seems possible) there is a \mathfrak{w} on the bull's haunch, it is ignored in the description. The letter on the bull is perhaps a brand; does \mathfrak{w} for \mathfrak{w} possibly mark him as one of the royal herd? ²⁸

The two different forms of zayin used on this coin are noticeable. The straight vertical stroke is that usually found in names on Asia Minor coins, as in *Ba'altarz*, *Pharnabazu*, *Ba'algazur*. The form used for the differentia is, on the other hand, the normal Aramaic lapidary form, as may be seen by a glance at the *C.I.S.*, or Cooke's *North Semitic Inscriptions*. The

²⁸ On such brands see my remarks in *Num. Chron.*, 1920, p. 106. On some coins of Onasi[oikos] of Paphos we have the initials (in Cypriote) of $\mathfrak{B}(\alpha\sigma\iota\lambda\acute{\iota}\omega\varsigma)$ $\mathfrak{O}(\alpha\sigma\iota\omega\iota\kappa\omicron\upsilon\varsigma)$ on the body of a bull (B.M.C. *Cyprus*, p. lxxiii). It is true that here the letters were inserted in the die after it had become so worn that practically nothing of the type was visible; possibly therefore they merely identify the coin, not the bull, as the king's.






straight vertical stroke, though the beginnings of it are found in an Aramaic lapidary inscription as early as the 5th-4th century B.C.,²⁹ does not seem to have been generally adopted in this material. On the other hand, it is normal in papyri. It would seem, therefore, that the inscriptions on the coins in which it occurs were prescribed to the engraver, but that when adding a differentia he used the form familiar to him.³⁰

Tarsus.

41. *Obv.* — AVTKAIMAVPCEVHPOCANTΩNEIN
OCCEB Bust of Caracalla l., laureate, with
slight beard, trace of paludamentum over r.
shoulder; in field Π Π.

²⁹ Carpentras stele from Egypt (Cooke, 75).

³⁰ This explanation, which had occurred to me, is supported by Dr. Cowley, who writes:

"The Aramaic form of Zayin is  in inscriptions on stone, &c., but it is  in the papyri always. The difference is not due to date, because the  is found, e.g. in the Sardis bilingual inscription which is dated in the 10th year of Artaxerxes, and therefore probably 455 B.C., and  is found in the Elephantine papyri from 494 to 400 B.C. The difference must therefore be due to the material used, or rather, the development of one sign from the other must be due to the habitual use of a particular material. In Palmyrene and Nabataean they wrote  even on stone, because they had developed their alphabet by using it in their pocket note-books, being business people. Hence I suggest that on the coin you mention, the name was copied by the engraver from a pen-and-ink exemplar before him, and he copied it as it was written as well as he could, but a little stiffly. The mint-mark he probably put on out of his own head, and used the form which he knew from inscriptions. Or might not the reason be that a mere straight line when standing by itself was not distinctive enough?"


Rev.—**ΑΝΤΩΝΙΑΝΗCCEVHPAΔPMHT** and in ex. **TAPCOV**; elephant l., above its back three palm-branches(?); in field A l., M r., K below.

Æ. ↑ 33 mm. 18-10 grm. [Pl. X.]

Evidently an agonistic type; cp. B.M.C., No. 196, where a wreath is shown above the elephant's back.

Cilicia (?).

42. *Obv.*—Bellerophon riding r. on prancing Pegasus, his r. hand raised, striking with spear. Border of dots. [Overstruck on a type, of which is visible the upper half of a hoplite advancing l., l. hand drawn back holding spear.]

Rev.—Same type as obverse; in field r. E, below 
All in dotted incuse square. [Traces of overstriking.]

Æ. ↓ 17.0 mm. Wt. 3.43 grm. [Pl. X.]

The distinction between the early Tarsian and Philisto-Arabian issues is notoriously difficult. In this case I am inclined to prefer the Cilician attribution. In the first place, because the *ankh* symbol on the reverse is commoner in Cilicia than in the other district; where, so far as I know, no coins of certain attribution have it. Secondly, the hoplite of the over-struck type recalls the hoplite of the earliest Tarsian coins. Thirdly, the presence of a Greek letter is unlikely in the Philisto-Arabian district.

Seleucus II.

43. *Obv.*—Head of Seleucus r., with slight whisker, diademed. Border of dots.



Rev.—**ΒΑΣΙΛΕΩ[Σ]** on r. downwards, **ΣΕΛ ΕΥΚΟY** on l. downwards. Apollo, nude, standing l. leaning l. elbow on tripod, holding out arrow in r. In field l. **NA**.

Æ. ↑ 28 mm. Wt. 16.78 grm. (H. Weber; from the Bunbury Collection: II, lot 460.)

Bunbury published this coin in the *Numismatic Chronicle* (1883, p. 82, Pl. IV. 8), and was inclined to think that **NA** on this, and **NI** on another of his coins (*ibid.*, Pl. IV. 7; now Ward 779) were dates, but could find no era which they fitted, and admitted that it was early to find dates on Seleucid coins. The bronze coin on which Cavedoni (*Rev. Num.*, 1856, p. 376) read **ΑΠ** as a date of Seleucus II is of Seleucus IV (B.M.C., *Sel.*, p. 32, No. 26; Babelon, *R. de Syrie*, No. 499). Babelon (p. lxxviii) may be right in dismissing the theory that these are dates, but the difficulty of explaining the detached letters **NI** remains. In any case the reading is not certain; the **N** is certainly reversed, and the second letter may be **Ξ** as I have read it in the Ward Catalogue; if so, the two cannot form a date.

Antiochus III.

44. *Obv.*—Head of King r., diademed.



Rev.—**ΒΑΣΙΛΕΩ[Σ]** on r. downwards, **ΑΝΤ ΙΟΧΟΥ** on l. downwards. Apollo, nude, drapery on r. thigh, seated l. on omphalos, holding arrow in r., resting l. on bow. In field l.  and horse's head l., r. 

R. † 28.5 mm. Wt. 17.13 grm. [Pl. X.] (H. Weber.) Sir Hermann's ticket says the coin came from the Bunbury Collection, but it does not appear in the Sale Catalogue.

A tetradrachm in the Walcher de Moltheim Collection (2919 a) has the same symbol and very similar, but not the same monograms, and is undoubtedly of the same style. The Paris coin (Babelon, *Rois de Syrie*, No. 339) with the same symbol also has some-

thing like one of the monograms.³¹ The style and fabric are Eastern. Imhoof has shown³² that the horse's head supersedes the grazing horse as a symbol in the time of Seleucus II, and continues in use on Babylonian silver and bronze to the time of Demetrius Soter, probably in allusion to the horse-breeding in the district.

45. *Obv.*—Head of Antiochus r., diademed. Border of dots.

Rev.—ΒΑΣΙΛΕΩΣ on r. downwards, ANT IOXOY on l. downwards. Apollo nude, drapery over r. thigh, seated l. on omphalos, l. resting on bow, r. holding arrow along which he looks; in field l. , r. .

R. ↑ 29 mm. Wt. 16.93 grm. (H. Weber; from the Bunbury Collection, lot 478.) Published by Bunbury, *Num. Chron.*, 1888, p. 90, note 44, Pl. V, No. 7.

46. The Bunbury (466)-Weber tetradrachm attributed by Newell to the mint of Antioch (*Amer. Journ.*, 1917, p. 6, No. 7) is now in the Museum.

Seleucus IV.

47. *Obv.*—Head of Seleucus r., diademed; fillet border.

Rev.—ΒΑΣΙΛΕΩΣ on r. downwards. ΣΕΛ ΕΥΚΟY on l. downwards. Apollo seated as usual, looking along arrow; in field l., star of five rays.

R. ↑ 29 mm. Wt. 16.87 grm. (H. Weber; from the Virtue Tebbs Collection, 1900, lot 211.)

A similar coin (from the same obverse die) is published by Macdonald (*Hunter Catal.*, iii, p. 37, No. 1,

³¹ Cp. also the coin of Seleucus IV, Egger Sale, xlv, No. 670.

³² *N. Z.*, 1913, p. 176.


Pl. lxvi, No. 1), but there the star has six rays. Newell (*Amer. Journ.*, 1917, p. 14, No. 31) gives this to Antioch.

Alexander I.

48. Tetradrachm of Sidon, dated 166 (as Babelon 899, Rouvier 1232), from the Trist (1895, lot 197) and H. Weber Collections.

Æ. 26 mm. Wt. 14.06 grm. Fine state.

49. *Obv.*—Tetradrachm of Antioch. Head of Alexander r. diademed; fillet border (same die as Newell, *Am. Journ.*, 1917, p. 49, No. 151, Pl. vii).


Rev.—ΒΑΣΙΛΕΩΣ|ΑΛΕΞΑΝΔΡΟΥ on r. downwards, ΘΕΟΠΑΤΟΡΟΣ|ΕΥΕΡΓΕΤΟΥ on l. downwards; Zeus seated l. resting l. on sceptre, holding Nike in r.; in field l. between figure and inscription ; outside, Φ; in ex. ΕΞΡ.

Æ. ↑ 31 mm. Wt. 16.54 grm. (H. Weber.)

There is a forgery of this variety by Becker.

Alexander II.

50. *Obv.*—Head of Alexander r. diademed; fillet border.

Rev.—ΒΑΣΙΛΕΩΣ on r. downwards, ΑΛΕΞΑΝΔΡΟ[Υ] on l. downwards. Zeus seated l. as usual, with sceptre and Nike; in field l., outside inscription, ; below throne, Β.

Æ. ↑ 27 mm. Wt. 15.49 grm. [Pl. X.] (H. Weber.)

A variety to be added to Newell's list of Antioch (*Amer. Journ.*, 1917, p. 86, Nos. 339-46). He observes that each of the supervising magistrates (whose monograms appear in the field) has four subordinates who sign in the exergue. This Β will make a fifth in the case of the magistrate concerned, unless ΔΙ on the Paris drachm (Babelon, No. 1293, Newell, No. 345) is really, as he conjectures, meant for ΑΦ.

Bostra.

51. *Obv.*—IMPCASMIVL PHIIPPOSAVG (*sic*). Bust of Philip Senior r. laureate, wearing paludamentum.

Rev.—COLMETROPOLISBOSTRA Beardless male head r., with long hair, confined by a fillet, wearing cuirass; below, traces of inscription (?).

Æ. ↑ 30.5 mm. Wt. 20.19 grm. [Pl. X.] From an Aleppo dealer.

This reverse type is the same as on the coin of Philip which I have already published,³³ and proposed to call Dusares, but it is from a different die. It is in much better preservation, and shows conclusively that Philip Junior is not intended. The bust is cut off with a straight truncation, leaving more than the usual space between it and the border; it might seem that the space was intended to contain something, possibly the name of the god; but no single letter is legible with any certainty, and Mr. Newell informs me that on a fine specimen in his collection the space is vacant.

The cuirass-like dress suggests that Dusares—if it is he—may have been identified not only with Zeus and Dionysus (for which there is other evidence) but with Ares; his name was sufficient to suggest such an association. A coin of Caracalla in Mr. Newell's collection also shows Dusares (named) in armour, and wearing a wreath.

Gerasa.

52. *Obv.*— . . . on l., ΛΟΒΗ . . . on r. Bust of L. Verus l. laureate, wearing paludamentum.

³³ B.M.C., *Arabia*, p. 23, No. 39. In a review of this work (see above, p. 160) Mr. Newell also observes that Dusares on the coin of Philip is represented in a cuirass.

Rev.—ΑΝΤΩΠΡ ΧΡΤΩΠΡΓ . . Tyche, with turreted crown, rudder and cornucopiae standing l.; behind her a smaller figure, wrapped in toga, apparently crowning her.

Æ. ↑ 23.5 mm. Wt. 8.20 grm. Presented by G. F. Hill.

This coin of the Gerasenes, under the name *Αντιοχέων* τῶ(ν) πρ(ὸς) Χρ(υσορόα) τῶ(ν) πρ(ότερον) Γ(ερασσηνῶν), resembles in its reverse the coin of M. Aurelius already described by Imhoof-Blumer,³⁴ but the dies are apparently not the same. It is unfortunately no better preserved than the other known specimens of this rare little group. So that we are no nearer explaining the curious type. Imhoof called the smaller figure the Emperor(?); and I followed him in B.M.C., *Arabia*. Kubitschek (*N. Z.*, lv, 1922, p. 162), however, rightly objects "nie kann im römischen Reich die Frömmigkeit so gross gewesen sein, dass man es hätte wagen dürfen, des Kaisers erst nach dem Tribut zu gedenken, den man einem Gotte schuldete oder zu schulden glaubte."

Characene. Attambelos I.

53. The important hoard of coins of this king, from which twenty-two tetradrachms have been acquired by the Museum, has been dealt with by me elsewhere.³⁵

Alexandria.

54. The fine bronze of Domitia, with reverse Eirene, has already been published by Mr. Walters in *Proceedings*, 1911, p. 18, and by myself in the *Journal of Egyptian Archaeology*, viii (1922), p. 164.

³⁴ *Rev. Suisse*, viii (1898), p. 47.

³⁵ *Numismatic Notes and Monographs*, No. 14 (1922).

Carthage.

55. *Obv.*—Head of Persephone l., wreathed with corn-ears, wearing triple-drop ear-ring and necklace with pendants. Border of dots.

Rev.—Horse standing r.; above, sun-disk with uraei; on exergual line, three pellets to r. of horse's l. hind hoof. Border of dots.

EL. \uparrow 23 mm. Wt. 10.945 grm. Sp. G. 13.18.

56. Another, different dies. *Rev.*—On exergual line five pellets, two on l., three on r. of horse's l. hind hoof. Border off the flan.

EL. \uparrow 22 mm. 10.89 grm. Sp. G. 12.96. [Pl. X.]

These two coins are from a find, of which twelve specimens passed through my hands, although I was unable at the time to make full notes of die differences. The Museum already possesses two other specimens of the same denomination, each of which shows one pellet on the exergual line behind the horse's l. hind hoof.³⁶ All four coins are from different dies. Müller has already noted (No. 63) specimens without any pellets on the exergual line, and others (No. 65) with three pellets. Doubtless there was a complete series up to five or more. As Müller has conclusively shown (p. 130), such marks served some private purpose of the mint.


Tesserae.


57. The following additions to Svoronos's list³⁷ may be mentioned. Those acquired in 1922 are from the Froehner Collection. To these I have added a few from the Earle Fox Collection bequeathed in 1920.

³⁶ Müller, *Ancienne Afrique*, ii, p. 85, No. 64. Weights, 10.709 grm. (Sp. G. 12.52) and 10.495 grm. (Sp. G. 12.45) respectively.

³⁷ *Riv. Ital.*, xi (1898), pp. 459-502.

Svor. Ser. A c' (Letter on each side, on reverse in incuse square).

 16 mm. Wt. 4.60. Froehner.


 16 mm. Wt. 4.41. do.

Svor. Ser. B a' (Lion's head, *rev.* Letter).

B 15 mm. Wt. 4.28. Froehner.

I 17 mm. Wt. 4.47. do.


Svor. Ser. C b' (Letter on each side, on reverse in concave field).

 17 mm. Wt. 5.31. Earle-Fox.

Svor. Ser. E a'.






7 19 mm. Wt. 3.94. Froehner.

Svor. Ser. E b' (Letter on each side, on reverse in incuse circle).

 17 mm. Wt. 6.22. Froehner. Note that the ypsilon is represented by V on *obv.*, and Y on *rev.*

Not in Svoronos:

Portion of a rectangular tablet, stamped with two dies:

(a) circular,   A  , Owl facing, between two branches of olive, exactly as on the fourth century triobol (B.M.C., *Attica*, Pl. V, 13). (b) square, . Æ. 21 × 19 mm. Earle-Fox.

The Museum has also acquired, partly by purchase for the Department of Greek and Roman Antiquities, but chiefly by the generous gift of Messrs. Spink & Sons, a large collection of leaden tesserae from the Froehner cabinet. Until the Athens collection is fully published it is hardly worth while describing casual specimens. The following, however, as apparently of Eastern workmanship, may be noted.

58. *Obv.*—Bust of man r., with slight beard(?), wearing kyrbasia. Linear border.

Rev.—Horse standing r., with hogged mane(?) and tail tied in a knot. Above, Phoenician letter 𐤎 (gimel?). Linear border in circular incuse impression. Lead 20 mm.

The horse appears to have a saddle-cloth on its back, but this may be due to scaling of the surface. Its general build recalls the animals mounted by Persian satraps; and the piece may come from Southern Asia Minor or Syria, and date from the fourth century.

G. F. HILL.

X.

ANGLO-SAXON ACQUISITIONS OF THE BRITISH MUSEUM.

II. KENT; ARCHBISHOPS OF CANTERBURY; EAST ANGLIA.

[SEE PLATE XI.]

KENT.

ECGBERHT (date uncertain, towards close of 8th century).

Babba.

155. *Obv.*—+EGGBERHT & within inner circle.

Rev.—B ABB A between limbs of cross with three limbs crosslet, the fourth being plain and forming the upright of the third letter; square voiding in centre of cross contains four pellets.

AR 17.6 grs. Montagu sale, 1896, lot 283 (illustrated).

EADBERHT PRAEN, 796-8.

Ethelmod

156. *Obv.*—.EAD. BEARHT .• REX divided by two lines.

Rev.—-[+]- +EPEL MOD divided by two lines, pellets in profusion.

AR 20.9 grs. Sir A. W. Franks gift.
[PL. XI. 1.]

157. *Obv.*—As obverse of preceding, variety of pellets.

Rev.—+T+ +EPEL MOD divided by two lines, pellets in profusion.

AR 18.4 grs. Evans coll. from Rolfe, probably found in Kent. [PL. XI. 2.]

CUTHRED, 798-806/7.

Duda.

158. Similar to B.M.C., No. 5, same inscriptions.

Æ 19 grs. Evans coll., found near
Cambridge, 1895.

Eaba.

159. *Obv.*—+CVÐRED REX Cross pattée within beaded circle.

Rev.—+E A B A divided by limbs of cross moline.
In circular voiding in centre of cross a cross
pattée.

Æ 19 grs. (piece broken from edge).
Evans coll., found near Andover.

[Pl. XI. 3.]

Sigeberht.

160. Similar to B.M.C., No. 8, but obverse of different style and with irregular lettering.

Obv.—+CVÐREDRE (X in field in front of face)
CAN T

Rev.—+SIGEBERHTI MONETA

Æ 21.5 grs. Evans coll. from Delgany
find; illustrated in *Num. Chron.*, 1882,
Pl. IV. 1.

161. Similar in type to B.M.C., No. 13, but on reverse the tribrach moline has a circular voiding enclosing a small tribrach.

Obv.—CVÐ RED REX

Rev.—SIS EBE RHT

Æ 20.8 grs. Sir A. W. Franks gift.
Cf. Ruding, Pl. III. 4.

162. Similar in type to B.M.C., No. 13, but on reverse the tribrach moline is double with a pellet in centre.

Obv.—CVÐ RED REX

Rev.—+SE BE RHT

Æ 21.2 grs. Evans coll. from Delgany
find; illustrated in *Num. Chron.*, 1882,
Pl. IV. 2.

Werheard.

163. Similar to B.M.C., No. 14, but reverse inscription omits the initial cross.

Æ 21.4 grs. Evans coll., found at Westbury near Frome, in 1865.

BALDRED, 806/7-825.

Diormod.

164. Similar to B.M.C., No. 15.

Obv.—+BELDRED REX CANT Head r.

Rev.—+DIORTODTONET In centre DRVR ETS
in two lines.

Æ 21.4 grs. Evans coll. from Delgany find.

165. *Obv.*—+BELDREDREXCANT Cross pattée.

Rev.—DI OR TO DM Cross pattée. From the inner circle spring four limbs, one pattée forming initial cross of legend, and three Y-shaped dividing the legend.

Æ 20.7 grs. Sir A. W. Franks gift; illustrated in *Num. Chron.*, 1894, Pl. III. 14.

Dunun.

166. *Obv.*—+BYLDREDREXN Bust r. dividing legend.

Rev.—+DYNYNTONETΛ Cross moline.

Æ 19.6 grs. Evans coll. from Delgany find. A similar coin is illustrated in *Num. Chron.*, 1852, p. 146.

Ethelmod.

167. *Obv.*—+BYLDREDREX Bust r. dividing legend.

Rev.—+EDELTODTONETAΛ Cross pattée over saltire pattée, circular voiding in centre, pellet between each pair of limbs.

Æ 18.5 grs. Montagu sale, 1896, lot 293 (illustrated) from Delgany find.

168. Similar to preceding.

Obv.—+BEALDREDREX

Rev.—+EDELMOÐMONETÆ

Æ 19.4 grs. Evans coll. from Delgany find; illustrated in *Num. Chron.*, 1882, Pl. IV. 3.

Oba.

169. Type as B.M.C., Pl. XI. 8.

Obv.—+BALDREDREXCANT Head r.

Rev.—+OBAMONETÆ In centre DRVR CITS in two lines.

Æ 21 grs. Sir A. W. Franks gift.

170. Similar to B.M.C., No. 17.

Obv.—+BELDREDREXCANT

Rev.—: + O B A.

Æ 17.4 grs. Sir A. W. Franks gift.

171. Similar to preceding, but no pellets in angles of cross on obverse.

Obv.—+BALDREDREXCANT

Rev.—+ O B A

Æ 19.6 grs. Sir A. W. Franks gift.

172. As preceding, but obverse legend reads +BELDREDREXCANT

Æ 19.3 grs. (piece broken from edge).
Evans coll. from Montagu sale, 1895, lot 294.

173. Similar to No. 170, but no pellets in angles of cross on reverse.

Obv.—+BELDREDREXCANT

Rev.—+ O B A

Æ 19.5 grs. Sir A. W. Franks gift.

Sigestef.

174. Type as B.M.C., Pl. XI. 11.

Obv.—+BELDREDREX Cross pattée.

Rev.—+SIGESTEF Cross pattée.

Æ 21.5 grs. Sir A. W. Franks gift.

Swefnerd.

175. From same dies as B.M.C., No. 18. Reverse reads
+SVVEFNERD.

Æ 18.9 grs. Sir A. W. Franks gift
(reverse reading incorrect in *Num.*
Chron., 1894, p. 48, No. 2).

176. Type as B.M.C., Pl. XI. 11.

Obv.—+BELDRED REX CANT Cross pattée.

Rev.—SVVEFNERD

Æ 20.3 grs. (edge slightly broken). Evans
coll. from Delgany find.

Tidbearht.

- 177-179. *Obv.*—+BELDRED REX CANT Cross pattée.

Rev.—+TIDBEARHT Cross with three limbs pattée
and one Y-shaped.

Æ 19.1 grs. Evans coll. from Delgany
find.

Æ 18.8 grs. and 19.2 grs. Sir A. W. Franks
gift.

All three specimens from different dies.
A similar coin is illustrated in *Num.*
Chron., 1853, p. 102.

COINS WITHOUT KING'S NAME (c. 825).

(This is the series of so-called "Sede Vacante" coins which bears the profile bust diademed; the coins with the tonsured head are described below, p. 251, under the Archbishops of Canterbury. All the Museum coins of this series are described, as their description was omitted from the Catalogue.)

Diormod.

180. *Obv.*—+DIORMODMONETA

Rev.—•+• DORO BERNIA CIVITA •S•

Æ 21.5 grs.

[Pl. XI. 4.]

181. *Obv.*—As preceding.

Rev.—•• DOROB ERNIAC IVITAS••

Æ 21·8 grs. Sir A. W. Franks gift.

Oba.

182. *Obv.*—OBĀ MON ETĀ Legend divided by three crosses springing from the inner circle.

Rev.—•+• DOROB ERNIAC IVITĀ S

Æ 21·6 grs. Sir A. W. Franks gift ;
illustrated in *Num. Chron.*, 1894, Pl.
IV. 2.

183, 184. As preceding, but omitting pellets beside cross on obverse. Both dies different.

Æ 20·2 grs. Sir A. W. Franks gift.

Æ 21 grs. Evans coll. from Delgany find.

Swefnerd.

185. *Obv.*—+SVVEFNED MONETĀ

Rev.—•DOROB ERNIACI VITAS

Æ 23·2 grs.

186. Similar, but with trefoil of pellets above and below reverse legend. Same *obv.* die as preceding.

Æ 22·2 grs. Sir A. W. Franks gift.

Werheard.

187. *Obv.*—+ƿERHEARDMONETĀ

Rev.—•• DOROB ERNIAC IVITAS ••

Æ 21 grs. Evans coll. from Delgany find.

ARCHBISHOPS OF CANTERBURY.

JAENBERHT, 766–792.

188, 189. Similar to B.M.C., No. 21, but reverse inscription not completely enclosed.

Obv.—+IENBERHTÆP

Rev.—+ OFFÆ REX Pellets variously disposed.

Æ 17·2 grs. Montagu sale, 1895, lot 296
(illustrated).

Æ 18·3 grs. Evans coll.

ÆTHILHEARD, 792/3-805.

- 190.
- Obv.*
- ÆDILHÆRDPONT Star of six rays.

Rev.—+OFFÆREXÆERC Star of six rays.

Æ 19 grs. Evans coll. from J. Wyatt,
found at Bedford; illustrated in *Num.*
Chron., 1920, Pl. V. 5.

- 191.
- Obv.*
- ÆÐILEÆRDPONT Cross crosslet.

Rev.—⌘ OFFÆ REX in three lines, upper and lower in lunettes, pellets variously disposed. Triangular ornament each side of ⌘.

Æ 18.2 grs. Evans coll. from C. Roach
Smith, 1890; illustrated in *Num. Chron.*,
1920, Pl. V. 6.

- 192.
- Obv.*
- ÆDIL HEÆRD ÆRCÆPI divided by two lines.

Rev.—⌘ with pellets each side in lunette + OFFÆ
•REX in three lines, two lower divided by
line.

Æ 20.5 grs. Montagu sale, 1895, lot 299
(illustrated).

- 193.
- Obv.*
- +ÆDIL•HEÆRDÆR C⌘ retrograde in centre.

Rev.—+C⌘E•NVVLFR•R•EX ⌘ in centre.

Æ 19 grs. Evans coll., found at Eastry.
[Pl. XI. 5.]

- 194.
- Obv.*
- ÆDILHFÆRDÆR C⌘ in centre.

Rev.—•C⌘ENVVLFR•EX ⌘ in centre.

Æ 21.6 grs. Rashleigh sale, 1909, lot 91
(illustrated); and in *Num. Chron.*, 1920,
Pl. V. 10.

WULFRED, 805-832.

Without moneyer's name.

195. Similar to B.M.C., No. 25, but on obverse bust divides legend [+V]VL FRED

Æ 19.2 grs. (broken). Presented by Mr.
L. A. Lawrence, 1920.

196. *Obv.*—+VVLFREDI $\overline{\Lambda}$ RCHIEPISCOPI Tonsured bust facing.

Rev.—+DOROVERNI $\overline{\Lambda}$ ECIVIT $\overline{\Lambda}$ TIS Cross crosslet.
 R 22 grs. Montagu sale, 1895, lot 308
 (illustrated).

Saeberht.

197, 198. Similar to B.M.C., No. 26.

Obv.—+VVLFRED $\overline{\Lambda}$ RCHIEP $\overline{\Lambda}$ Three pellets each
 side of head.

Rev.—+S $\overline{\Lambda}$ EBERHTMONET $\overline{\Lambda}$
 At 21.7 grs., 20.7 grs. Sir A. W. Franks
 gift. From the same obverse die.

199. Similar, with no pellets in field on obverse.

Obv.—+VVLFRED $\overline{\Lambda}$ RCHIEP $\overline{\Lambda}$

Rev.—+S $\overline{\Lambda}$ EBERHT $\overline{\Lambda}$ ONET $\overline{\Lambda}$.
 R 21 grs. Sir A. W. Franks gift.

Sweferd.

200, 201. Similar to preceding, with three pellets each side
 of head.

Obv.—+VVLFRED $\overline{\Lambda}$ RCHIEP $\overline{\Lambda}$ (On the Franks coin
 the $\overline{\Lambda}$ of the title is put below the D of the
 name.)

Rev.—S $\overline{\Lambda}$ VVEFHERD MONET $\overline{\Lambda}$
 R 19.2 grs. Evans coll., found near
 Wallingford. [Pl. XI. 6.]
 R 17.6 grs. Sir A. W. Franks gift.

202. Similar, but no pellets beside head.

R 20 grs. Sir A. W. Franks gift.

203. *Obv.*—+ $\overline{\mathcal{P}}$ LFRED $\overline{\Lambda}$ R $\overline{\mathcal{C}}$ ERS Tonsured bust facing
 dividing legend.

Rev.—+S $\overline{\mathcal{P}}$ EFHE $\overline{\Lambda}$ RDMOH. Monogram of DOROB $\overline{\mathcal{C}}$
 R 19 grs. Sir A. W. Franks gift; illus-
 trated in *Num. Chron.*, 1894, Pl. IV. 1.

Wilnod.

204-206. Similar in type to B.M.C., Pl. XII. 8.

Obv.—+VVLFRED $\overline{\Lambda}$ RCH $\overline{\text{I}}$ E $\overline{\text{P}}$ IS. Tonsured bust facing within circle. One coin has pellet each side of head.

Rev.—+VILNODMONET $\overline{\text{I}}$ DRVR $\overline{\text{C}}$ ITS in two lines.

Æ 21.5, 20.8, 18.8 grs. Sir A. W. Franks gift. [Pl. XI. 7.]

COINS WITHOUT ARCHBISHOP'S NAME (c. 825).

(This is the series of so-called "Sede Vacante" coins which bears the tonsured bust facing; for the series with profile head, see above, p. 247. All the Museum coins of this series are described, as their description was omitted from the Catalogue.)

Luning

207, 208. *Obv.*—+LVNINGMONET $\overline{\Lambda}$ Three pellets each side of head.

Rev.—•+• DORO BERNIA $\overline{\text{C}}$ IVITA $\overline{\text{C}}$ •S•

Æ 20.9 grs. Sir A. W. Franks gift. [Pl. XI. 8.]

Æ 20.4 grs. Purchased 1838.

209. Similar, $\overline{\Lambda}$ unbarred in $\overline{\text{C}}$ IVITA $\overline{\text{C}}$ S

Æ 17.9 grs. (small piece broken from edge). Purchased 1890.

210. Similar, reverse reads ••••DOROB ERNIA $\overline{\text{C}}$ IVI
TAS •••

Æ 20.8 grs.

Sweffherd.

211. *Obv.*—ΣVVEFHERDMONE[T?] $\overline{\Lambda}$ No pellets beside head.

Rev.—As No. 207, above.

Æ 18.3 grs. (small piece broken from edge). Sir A. W. Franks gift.

Wilnod.

212. *Obv.*—+VILNOD MONETΛ Very small bust, no pellets.

Rev.—As No. 209, above.

Æ 21.1 grs. Sir A. W. Franks gift.

CEOLNOTH, 833-870.

Biarnred.

213. Similar to B.M.C., No. 30, but no pellets beside bust, Λ on reverse unbarred in both words.

Æ 20.3 grs. Evans coll.

BIORNMOD.

214. *Obv.*—+CIALNO ÐARCEP Tonsured bust dividing circle and legend.

Rev.—+BIORNMODTONETΛ Monogram of DO ROBE (cf. *Num. Chron.*, 1894, Pl. IV. 1).

Æ 18.5 grs. Sir A. W. Franks gift.

- 215, 216. Similar to B.M.C., No. 34.

Obv.—+CIALNO ÐARCE Bust as before.

Rev.—+BIORNMODMONET Degraded monogram.

Æ 19 grs., 18.7 grs. Sir A. W. Franks gift.

- 217-219. +CIALNO ÐARCE

+BIORNMODTONET

Æ 19 grs. and 2 broken specimens. Sir A. W. Franks gift.

220. Similar, but two pellets in obverse legend to r. of shoulder, and on reverse TONETΛ

Æ 18.7 grs.

Lil.

221. Similar to B.M.C., No. 46.

Obv.—+CEOLNOÐ ARHIEP Bust dividing legend.

Rev.—+LILMONETÐDORVERN CIVITAS in angles of cross, the first two letters retrograde.

Æ 18.2 grs. Evans coll. from Montagu sale, 1895, lot 313.

Wunhere.

222. Similar to B.M.C., No. 58, but obverse of unusual style.

Obv.—+CIXLNO ÐARC Bust dividing legend.

Rev.—+VVNERETONETΛ Monogram.

Æ 20 grs. Sir A. W. Franks gift.

[Pl. XI. 9.]

223. As preceding, but obverse of usual type and monogram of the larger form (cf. B.M.C., Pl. XII. 12).

Æ 20.8 grs. Evans coll.

- 224, 225. Similar, with pellet after L of king's name.

Æ 22 grs., 19.4 grs. Sir A. W. Franks gift.

PLEGMUND, 890-914.

Acmund.

226. *Obv.*—+PLEGMVNDARCCHIEP Cross moline over saltire pommée.

Rev.—HICMYN DMOE in two lines divided by cross pattée between two annulets. Small triangle above and below.

Æ 23.7 grs. Montagu sale, 1895, lot 338 (illustrated).

Hunfred.

227. From same reverse die as B.M.C., No. 87, but obverse reading +PLEGMVNDARCCHIEP

Æ 24.8 grs. Evans coll. from Marsham sale, 1888, lot 117.

Sighelm.

228. Similar in type to B.M.C., Pl. XIII. 12.

Obv.—+ PLEGMVNDARCCHIEP Small cross pattée.

Rev.—SIGEHE LMMON in two lines divided by three crosses, three pellets above and below.

Æ 24.1 grs. Evans coll. [Pl. XI. 10.]

EAST ANGLIA.

BEONNA (?).

Efe.

229. *Obv.*—+BENNARESS? (partly in Runes). Circle of dots, pellet in centre.

Rev.—+ E F E in angles of cross, three pellets after each letter; four pellets in square central voiding of cross.

Æ 14.9 grs. Montagu sale, 1895, lot 339 (illustrated).

ÆTHELSTAN, c. 828-837?

Eadgar.

230. *Obv.*—+EÐEL-ZTÄHRE+ Bust r., inner circle from shoulder to shoulder.

Rev.—+EÄ DEÄR MOHE TÄ in four lines across field.

Æ 19.8 grs. Montagu sale, 1895, lot 341.
[PL. XI. 11.]

231, 232. *Obv.*—+EDELSTANRE Cross pattée over saltire pattée. Very similar in style to obverse of B.M.C., p. 85, no. 6, with same curious form of N (see B.M.C., Pl. XIV. 6).

Rev.—+EÄDȚÄR NNOHE Cross pattée, pellet in each angle.

Æ 21.1 grs. Evans coll. from W. Allen sale, 1898, lot 192 (illustrated).

Æ 19.7 grs. Sir A. W. Franks gift.

Both coins from one reverse die.

233. *Obv.*—+EDELSTÄNRE Cross pattée, pellet in each angle.

Rev.—+EÄDȚÄRMONE Cross pattée over saltire pattée.

Æ 17.5 grs. Sir A. W. Franks gift.

Eadnoth.

234. *Obv.*—EÐELITÄHRE+ Bust r. inner circle from shoulder to shoulder.

Rev.—+EADHODTOHET Cross crosslet.

Æ 21.5 grs. Evans coll. [Pl. XI. 12.]

235. *Obv.*—EDEL2TÄHREAI Cross pattée, pellet in each angle.

Rev.—+EDHODNNRHÄ Cross pattée, pellet in each angle.

Æ 19.2 grs. Sir A. W. Franks gift.

Ethelhelm.

- 236, 237. *Obv.*—+EÄDEISTÄHRE Cross pattée, pellet in each angle.

Rev.—ÆDELNELWMO Cross pattée, no pellets.

Æ 19.3 grs., 15.3 grs. Sir A. W. Franks gift, both from one obverse die. The reverses vary in pellets in the moneyer's name.

238. *Obv.*—+EXÐEΓSTÄHRE Cross pattée, pellet in each angle.

Rev.—:EÐEÄLNEJNNNO Cross pattée, pellet in each angle.

Æ 14.8 grs. Sir A. W. Franks gift.

239. *Obv.*—ÆDELSTÄNR— Cross pattée, wedge in each angle.

Rev.—ÆÐ—ELWM:O.H Cross pattée, pellet in each angle.

Æ fragment. Sir A. W. Franks gift.

240. *Obv.*—ÆÐEΓSÄNREX Cross pattée.

Rev.—ÆÐELHENNNO Cross pattée.

Æ 18.8 grs. Sir A. W. Franks gift.

Mon.

- 241, 242. *Obv.*—+EÐEL2TANI In centre \bar{A} , pellets profusely in the field and in the legend.

Rev.—MOH +MOHE TÄ in three lines, pellets profusely.

Æ 19.3 grs., 21.8 grs. Sir A. W. Franks gift. [Pl. XI. 13.]

243. Similar, reading MOM +MOME TA
R broken. Sir A. W. Franks gift.
244. *Obv.*—+EPEL2TANI In centre \bar{A}
Rev.—+NNONNONE:T• Cross pattée, pellet in each angle.
R 21.5 grs. Sir A. W. Franks gift.
245. *Obv.*—EDEL2TAHREA I Cross pattée, pellet in each angle.
Rev.—+NNOHNNOHET Cross pattée, pellet in each angle. From same reverse die as B.M.C., No. 10.
R 20 grs. Sir A. W. Franks gift.
246. As preceding, from same obverse die, reverse from different die.
R 18.5 grs. (piece broken from edge).
 Sir A. W. Franks gift.
247. *Obv.*—+EÆDEL2TAH Cross pattée, pellet in each angle.
Rev.—+NONNONET Cross pattée, pellet in each angle.
R 19.4 grs. Sir A. W. Franks gift.
248. *Obv.*—From same die as preceding.
Rev.—+NNOHNNOHET Cross pattée, no pellets.
R 19.8 grs. Sotheby, 19. xii. 1911, lot 183.
249. *Obv.*—ÆDIL2TAHR Cross pattée, pellet in each angle.
Rev.—NNOHNNOHET Cross pattée, no pellets.
R 19 grs. Evans coll. from Montagu sale, 1895, lot 348.
250. *Obv.*—A••EPIL•2T•AHR• Cross pattée, pellet in each angle.
Rev.—NNOHNNOH••ET Cross pattée, no pellets.
R 19 grs. Sir A. W. Franks gift.

Reghelm.

- 251.
- Obv.*
- +EƿERYTHR
- \bar{A}
- in centre, no inner circle.

Rev.—+RECHERT Pellet in circle. \bar{A} 20.2 grs. Sir A. W. Franks gift,
illustrated in *Num. Chron.*, 1894, Pl.
IV. 4.

Torthelm.

252. Similar to B.M.C., No. 17; from same reverse and different obverse die.

 \bar{A} 18.5 grs. (piece broken from edge).
Sir A. W. Franks gift.

- 253.
- Obv.*
- +EDELSTANI In centre
- \bar{A}
- , no inner circle.

Rev.—+TORHTELH Cross pattée, wedge in each
angle. \bar{A} 20.6 grs. Sir A. W. Franks gift.

- 254.
- Obv.*
- EDELSTANI In centre
- \bar{A}
- , no inner circle.

Rev.—+TORHTHE.L.HH Cross moline within inner
circle. \bar{A} 18.5 grs. Sir A. W. Franks gift.

[Pl. XI. 14.]

Tuduwine.

- 255.
- Obv.*
- +EAPEL.STAHRE Cross pattée, pellet in each
-
- angle.

Rev.—TVDVPINEHO Cross pattée, wedge in each
angle. \bar{A} 18.5 grs. Sir A. W. Franks gift.

- 256.
- Obv.*
- EDELSTAHRE.
- \bar{A}
- . Cross pattée, wedge in each
-
- angle.

Rev.—TVDVPINEHO Cross pattée. \bar{A} 17.5 grs. Sir A. W. Franks gift.

Uncertain moneyer.

257. A fragment reading:

Obv.— — $\Gamma\Upsilon\bar{T}\bar{A}H$ — Beaded circle with pellet in
centre.*Rev.*— — RERE — Beaded cross, no inner circle.
Sir A. W. Franks gift.

Without moneyer's name.

REX ANG on reverse.

258-265. Seven coins and one fragment similar to B.M.C., Nos. 19, 20. These have varieties of stops and lettering, four of them have C for L in king's name.

Æ from 18.8 to 21.5 grs. One from Evans coll., the remainder from Sir A. W. Franks gift.

266, 267. King's name on both sides, type as REX ANG coins.

Obv.—EÐEΓΓΛΥHDEX

Rev.—EDECTAN

Æ 19.9 grs., 21.6 grs. from same obverse die. Sir A. W. Franks gift.

AETHELWEARD, c. 837-850.

Aethelhelm.

268. Similar to B.M.C., No. 21.

Obv.—EDELÐ·ARDREX Cross pattée, crescent in each angle.

Rev.—ÆDELNELNN Cross pattée, pellet in each angle.

Æ 21.2 grs. Evans coll. from Croydon find, 1862.

269. Similar, omitting pellet in obverse legend, and having wedges instead of pellets in angles of obverse cross.

Æ 19.9 grs. Montagu sale, 1895, lot 354 (illustrated).

EADMUND, † 870.

Eadberht.

270. Similar to B.M.C., No. 53.

Obv.—+EADMVIDREX Æ in centre.

Rev.—+EADBERHTMO Cross pattée, pellet in each angle.

Æ 18.4 grs. Evans coll. from Croydon find, 1862.

Twicga.

271. Similar to B.M.C., No. 82.

Obv.—+EADMVNDREX Crossed omega type.

Rev.—+TƿICEΛMOH Cross pattée, pellet in each angle.

Æ 20.7 grs. Montagu sale, 1895, lot 362 (illustrated).

ST. EADMUND COINAGE.

Adalbert.

272. *Obv.*—+SCIΛMII.D *Rev.*—+ΛDΛLBERT E

Æ 21 grs. Evans coll. from Cuerdale find.

Ansfred.

273. *Obv.*—+SCEΛ.I.NM.I.

Rev.—+ΛNS.FR.EDM This coin is from the same dies as B.M.C., No. 256.

Æ 18.9 grs. Purchased 1890.

Berner.

274. *Obv.*—+SCEΛDN *Rev.*—+BERNER

Æ 19.5 grs. Presented anonymously, 1921.

Uncertain moneyer.

275. *Obv.*—+SYCERDIMIT

Rev.—+OCRMBYDTE

Æ 16.8 grs. Presented by H.M. the King, 1920, from Cuerdale Find.

G. C. BROOKE.

XI.

THE ENGLISH AND IRISH COINAGES OF 1542-1544.

I HAVE recently had the opportunity of examining a find of coins which was dug up some years ago in County Down. The find as described below is believed to be complete except for one coin which was given away at the time of the discovery. In dating the Irish coins I have followed Mr. Symonds (*Num. Chron.*; 1915, pp. 192 ff.). The new style is adopted throughout for dates.

IRISH COINS.

Richard III(?).

Three-crown Groat (legend uncertain) . . . 1

Henry VIII.

Harp Groats of 1536-7, initialed h I
(Jane Seymour) . . . 7

Ditto of Jan.-July 1540, initialed h T
(Anne of Cleves) . . . 6

Ditto of Aug. 1540-Jan. 1542, initialed h K
(Katherine Howard) . . . 4

(the above all bear the title *Dominus*).

Ditto before Jan. 1542, initialed h R *Dominus*
Hibernie.

mm. Crown . . . 2

mm. *obv.* Trefoil, *rev.* Crown . . . 1

mm. Trefoil . . . 4

Ditto after Jan. 1542, initialed h R *Hibernie Rex*.

mm. Trefoil . . . 6

mm. Rose. 2

mm. Lis 6

Ditto 1545-6, initialed h R *Hibernie Rex*.

mm. Lis; dated 37 . . . 1

Ditto after 1 April 1546, struck at Bristol.

mm. WS (mon.); dated 38. 1

ENGLISH COINS.

Edward IV.

Light Groats (mint-marks: Sun, Crown, Pierced
Cross and Pellet, Heraldic Cinquefoil) . . . 4

Henry VII.

Groat, full-face with single-arched crown.
mm. Crosslet 1
Half-groat, full face of Canterbury, double-arched
crown. mm. Ton. 1
Ditto, profile of York (?). mm. *obv.* Martlet, *rev.*
Rose; late type of cross on reverse (*Num. Chron.*,
1919, p. 258) No keys 1
Ditto, ditto. mm. Rose (late type of cross on
reverse) No keys 1

Henry VIII.

Profile Groat. 1st issue. mm. Castle 1
Ditto. 2nd issue. mm. Rose 1
Ditto, ditto. mm. *obv.* Lis, *rev.* Rose 1
Full-face Groat of Bristol. mm. (*rev.* only, WS
mon.) 1

FOREIGN COIN.

Flanders.

Double Stiver of Charles the Bold, struck between
1467 and 1474. As *Rev. Num.*, 1862, Pl. IV. 60
(holed) 1
— 13
—
54

The harp groats which bear the initials h R are assigned by Mr. Symonds to the consortless periods, the longest of which is between Jane Seymour and Anne of Cleves, and the approximate synchronism between the death of Katherine Howard and the proclamation of the "King of Ireland" style is in support of this view. But the coins themselves will hardly bear this classification. The mule, which has on the obverse the Trefoil mint-mark and on the reverse the Crown mint-mark and the initials h R, implies the issue of some, at least, of the coins with Crown mint-

mark and initials h R after the death of Katherine Howard, nor can any of the Trefoil-marked groats with title *Dominus Hibernie* be placed before the h K coins in view of the same mint-mark continuing on the earliest *Hibernie Rex* coins.

There is, in fact, a substantial series of coins which must be assigned to a period after Katherine Howard's initial was removed and before the adoption of the style *Hibernie Rex*. It was not till November 1541 that the king's suspicions of Katherine Howard were aroused; in that month he sent her away to live apart from him, and in the following February (1542) the bill of attainder was passed and she was beheaded. It is unlikely that her initial would have been removed from the coins before the bill of attainder was passed; in any case the earliest possible date would be the end of November 1541, and that does not leave an interval before the issue of the "King of Ireland" proclamation (Jan. 1542) long enough for it to include some at least of the Crown-marked coins with h R and the Trefoil-marked coins which bear the title *Dominus Hibernie*.

The coins, therefore, indicate that the new style was not adopted on the coins until considerably later than it was ordered by proclamation. The difficulty of accepting the evidence of the coins without further investigation is that, in the first place, the proposition is one that seems to require explanation, and, secondly, the Irish coins were at this time made at the Tower mint, and the English coinage, as at present dated by the indenture of May 1542, indicates a change contemporary, or nearly contemporary, with the proclamation, the rare English coins of the second (1526-

42) issue with *Hibernie Rex* title and Pheon mark, filling in the few months between the proclamation (January) and the indenture (May).

The indenture of 1542 which contracts for the making of the new coinage with gold of 23 carat and silver of 10 oz. fineness to include the new testoon and a full-faced groat, is supported by a proclamation ordering gold coins to be taken at the enhanced value, 8s. instead of 7s. 6d. to the angel, and by an account rendered by the warden of the mint of the revenues of the Mint for the period 1 July 1542 to 31 March 1544, which shows a coinage of 541 lb. of 23 carat gold to have been made under the 1542 indenture in the months of July 1542 to March 1543, also 22,053 lb. of 10 oz. silver during the whole period of the account, July 1542 to March 1544. These documents are published by Mr. Symonds in vol. x of the *British Numismatic Journal*, pp. 127 ff., so I need not dwell on their contents, except to add the monthly output of 23 carat gold during the nine months in question, namely July, 160 lb.; August, 43 lb. 6 oz.; September, 47 lb.; October, 29 lb.; November, 40 lb.; February, 89 lb.; March, 133 lb. Total 541 lb. 6 oz.¹ It is necessary also to draw attention to the evidence of a later coinage, in the continuation of the same account, of gold and silver of the previous (1526-42) issue; Mr. Symonds says of this that there is evidence that moneys of the second and third coinages were struck concurrently. (In *Num. Chron.*, 1915, p. 202, he refers again to it as the "overlapping in the English series in 1542"). How was it possible for the new angel of 80 grs., 23 carat

¹ For these detailed figures I am indebted to Mr. Charles Johnson of the Public Record Office.

fine, valued at 8s., to be struck in July 1542 to March 1543, and the old angel of 80 grs., 23 carat $3\frac{1}{2}$ grs. fine, valued at 7s. 6d., in Sept. 1543 to March 1544?

The coins ordered in these two "overlapping" issues are:

1526-42.	1542-4.
Gold:	
Sovereign (22s. 6d.) 240 grs., 23 c. $3\frac{1}{2}$ grs. fine.	Sovereign (20s.) 200 grs., 23 c. fine.
Half-sovereign (11s. 3d.) 120 grs., 23 c. $3\frac{1}{2}$ grs. fine.	Half-sovereign (10s.) 100 grs., 23 c. fine.
Ryal (11s. 3d.) 120 grs., 23 c. $3\frac{1}{2}$ grs. fine.	
Half-ryal (5s. 7 $\frac{1}{2}$ d.) 60 grs., 23 c. $3\frac{1}{2}$ grs. fine.	
Quarter-ryal (2s. 9 $\frac{3}{4}$ d.) 30 grs., 23 c. $3\frac{1}{2}$ grs. fine.	
George noble (6s. 8d.) 71 $\frac{1}{2}$ grs., 23 c. $3\frac{1}{2}$ grs. fine.	
Half George noble (3s. 4d.) 35 $\frac{5}{8}$ grs., 23 c. $3\frac{1}{2}$ grs. fine.	
Angel (7s. 6d.) 80 grs., 23 c. $3\frac{1}{2}$ grs. fine.	Angel (8s.) 80 grs., 23 c. fine.
Half-angel (3s. 9d.) 40 grs., 23 c. $3\frac{1}{2}$ grs. fine.	Half-angel (4s.) 40 grs., 23 c. fine.
Crown of Double Rose (5s.) 57 $\frac{21}{8}$ gr., 22 c.	
Half-Crown Ditto (2s. 6d.) 28 $\frac{4}{8}$ grs., 22 c.	
Silver:	
	Testoon (12d.) 120 grs. 10 oz. fine.
Groat (4s.) 42 $\frac{2}{3}$ grs., 11 oz. 2 dwt. fine.	Groat (4d.) 40 grs., 10 oz. fine.
Half-groat to Farthing in proportion.	Half-groat to Farthing in proportion.

The proclamation, which put the new coinage into currency and authorized the enhancing of gold to values based on an angel of 8s., is not dated but was clearly issued in the month of May. By reference to

the indenture Mr. Symonds assigns it to the year 1542. Other documentary evidence, however, seems to be conclusive in dating the proclamation to May 1544. In the *Letters and Papers of Henry VIII* no reference is made to the enhancement of gold in the years 1542 and 1543 except an expression by the Spanish ambassador in dispatches to the Emperor and to the Queen of Hungary, both dated 25 March 1542, that he learns that Parliament are going to raise the value of the coin as has been done in France (vol. xvii, No. 197, and App. B, No. 11, p. 719), to the Queen he writes that he learns "from a good quarter" that they are considering the enhancement of the coinage. The intention, expressed in the indenture contracting for the new money to be made, is here confirmed in the deliberations of Parliament. But of its fulfilment no notice appears until the year 1544, when mention of the enhancement of gold is not uncommon. The following instances show quite clearly that it was not in May 1542 but in May 1544 that the proclamation concerning the new coinage was issued:

Anthony Cave writes to Thomas Smyth from Calais on 26 May 1544, sending by bearer ducats of fine gold to be sold either at Mr. Bowles or at the Mint at 47s. 8d. the oz., or at least 47s. 4d. "Since fine gold is 48s." Also 204 crowns of the Rose weighing 24 oz. for which I trust "after this new rate" they will give at least 44s., "for before they were at 42s. an ounce".

(Vol. xix, part i, App. 7, p. 482.)

The Privy Council write to Tunstall, Bishop of Durham, on 18 May 1544, that £8,000 has been dispatched for the frontiers. "As the coin is raised in the manner shown by the proclamation herewith, notice must be given that it be paid accordingly."

(*Ibid.*, p. 325, No. 528.)

This would not be the first opportunity of drawing the bishop's attention to the proclamation, had it been issued in 1542, for in November 1543 Tunstall acknowledged the arrival of £4,000 for wages, &c. (Vol. xviii, part ii, No. 433.)

In an Augmentations list of year ended 29 September 1544 is the entry: "Received from Wm. Honnynges, clerk of the King's Council, in repayment of a loan of £100 made by warrant of 29 April, 35 Henry VIII [1543], with increment thereon by the enhancement of the coinage, £75 9s. 8d."

(Vol. xix, part i, No. 328.)

The enhancement must therefore have taken place between 29 April 1543 and 29 September 1544.

A list of King's money, jewels, &c., beginning 24 April 1542, sets out entries in consecutive order of date and contains between entries dated 14 May 1544, and 30 May 1544, an entry: "At the time of the proclamation for the enhancing of the coin in rialles, angelles, and half angelles of the sum of £1399 13s. 9d. amounting one with another to the number of 3,732½ angelles, and so won to the King his Majesty's use, after the rate of 6d. in every angell, or 16d. in the pound, £98 6s. 3d."

(Vol. xvii, No. 267.)

The time of the proclamation would therefore seem to fall between 14 and 30 May 1544.

The proclamation for the new coinage with enhanced value must, on the strength of this cumulative evidence, be placed in May 1544. The postponement of the proclamation from 1542, when we have seen, both from the indenture of that year and from the Spanish Ambassador's dispatches, it was intended to be issued, until two years later throws light upon the anomaly we have already noticed in the Exchequer accounts, namely, the striking of coinage of the old (1526) issue

subsequent to a coinage of the enhanced value under the 1542 indenture.

Sir Martin Bowes, acting under his contract of May 1542, struck in the months of July 1542 to March 1543, 541 lb. 6 oz. of 23 carat gold and, between July 1542 and March 1544, 22,053 lb. of 10 oz. silver. This was no doubt to be put into currency immediately the necessary proclamation was issued. But, presumably through Parliament refusing to sanction the enhancement of the values, the proclamation was not issued. It was therefore impossible to put into circulation the money already coined by Bowes, and a small issue of old (1526) coinage was necessary. This reissue of the old coinage is the output of the period 29 September 1543 to 31 March 1544, which is accounted for in the Warden's account following that of the new coinage above mentioned. It was a very small coinage, namely, 31 lb. 6 oz. of 23 carat $3\frac{1}{2}$ grs. gold, 181 lb. of crown (22 c.) gold, and 2,408 lb. of 11 oz. 2 dwt. silver.

To return to the question of the change in the king's style from *Dominus Hibernie* to *Hibernie Rex*, which was proclaimed in January 1542, we can hardly be wrong in assuming that the change of title was made on the coinage at the time that work began under the indenture of May 1542. The title *Hibernie Rex* would therefore be found on the reissue of old coinage struck in September 1543 to March 1544, and we may reasonably identify with this small output the rare "2nd. issue" coins with Pheon mint-mark and *Hibernie Rex* title. The earlier English coinage struck by Bowes in July 1542 to March 1543 was of course of the new type with the full-faced groat, but I think it is probable that, owing to the proclamation not being issued,

it was melted down and so has not survived to our day; it would presumably have borne the title *Hibernie Rex* and the mint-mark Pheon. Nevertheless, the accounts although complete from 1542 to 1547 for Bowes's mint, do not mention any melting-down of the 1542 issue. If it was not melted down, it must have been put into circulation after the profile coins with *Hibernie Rex* title, and it is not at present distinguished from the remainder of the "Third coinage" which was struck in 1544. The indenture for the "Fourth coinage" followed the proclamation almost immediately. Its date is known by reference in Exchequer accounts as 28 May 1544, and the coinage contracted for was identical with that of the 1542 indenture except for the further debasement of silver from 10 oz. to 9 oz. fine (*B. N. J.*, vol. x, p. 156). The earliest known full-faced groat is the so-called mule with saltires in the forks of the reverse cross; it has Lis mint-mark and cannot, I think, belong to the suppressed coinage of 1542-3, which should bear a Pheon. If Mr. Symonds means this coin by No. 2 of his table of assayed coins on p. 166 of *B. N. J.*, vol. x (he describes it as having "lys" in the forks of the cross), it is evidently of the 9 oz. silver ordered by indenture of 28 May 1544. If this is so (Mr. Symonds thinks it is but cannot, at this distance of time, be certain), I think we must conclude that no coins struck under the 1542 indenture survive, and the 10 oz. silver may be eliminated from our classification.

Mr. Symonds has kindly drawn my attention to the submission for the king's approval of coins of 23 carat gold and 9 oz. (i. e. 1544) silver (*B. N. J.*, vol. x, p. 156). If the 10 oz. silver was not circulated, these would be

the first issue of full-faced coins for circulation. At all events there is, as he says, no evidence that coins of the 1542 standard were so submitted.

The Irish coinage, which until 1546 was struck at the Tower of London, would most probably conform with the English coinage in adopting the new title *Hibernie Rex*. That is to say, the new style was most probably put on the earliest set of dies cut for Irish groats after the English indenture of May 1542; it may be that, owing to the suppressing of the English coins struck in 1542-3, we find the title earlier on the Irish than on the English coins, but I should not date the change on Irish coins earlier than May 1542.

G. C. BROOKE.

XII.

JOHN RUTLINGER AND THE PHOENIX BADGE OF QUEEN ELIZABETH.

(SEE PLATES XII, XIII.)

AMONGST the rare line engravings in the British Museum is a finely executed print, portraying Queen Elizabeth wearing a decidedly ornate costume, a veil, and a large closed ruff.¹ (See PL. XII.)

She stands under a canopy, her left hand supporting a feather fan upon a table, whilst in her right, as though she were about to don it herself or decorate another with it, she holds, threaded upon a ribbon, an oval badge. This ornament, showing a phoenix in flames, is without inscription and is surrounded by scrolls of metal work set with jewels, and, excepting that it bears no monogram, resembles the reverse of the well-known Phoenix Badge.² The line engraving of the queen, enclosed in a large oval, is decorated in the spandrils with somewhat stiff arabesques. Even the veil is wiry and rigid, whilst the jewels and strapwork surrounding the picture, not less than the rose-embroidered dress and the ornaments worn by Elizabeth, suggest, as Sir Sidney Colvin observes, that

¹ No. 90 in Mr. Freeman O'Donoghue's *Engraved British Portraits*, 17 x 12 inches, three-quarters to left, see illustration on p. 42 of *Early Engraving and Engravers in England*, by Sir Sidney Colvin, 1905.

² *Medallic Illustrations*, vol. i, p. 124, No. 70.

the print is the work of a goldsmith, and one of no small technical skill in his craft.³

Only two examples of this portrait are known, and unfortunately neither is perfect, for the one has defective margins and shows no signature, date, or title, whilst the other, also in the national collection, is more severely mutilated, the background being almost entirely cut away. This latter print, however, supplies the information that we have before us the work of "Johann Rutlinger", but the dedication, inscription, and date, if such there were, are amongst the missing portions. The ruff worn by Elizabeth is of the large closed type, represented on her second Great Seal in 1586, and shown in the well-known "Armada Jewel" in the collection of the late Mr. Pierpont Morgan. We cannot, however, place much reliance on the fashion of a ruff, for various shapes reigned concomitantly, and the large closed ruff is seen upon one of the little phoenix medals of Elizabeth which appeared first on her accession in 1558 and was repeated in 1560.⁴ This ruff, moreover, continued in use, with slight variations, until the beginning of the second quarter of the seventeenth century. But the appearance of the queen, as shown in the print, is that of a woman somewhat advanced in years, although considerably younger than in several pictures definitely dated to the last decade of Elizabeth's reign, and the pattern of the large sleeves with rolls on the shoulder was in vogue as early as 1570, continuing for a considerable time. Suggestive evidence has, however, been discovered in the Depart-

³ *Early Engraving and Engravers in England*, p. 42.

⁴ *Med. Ill.*, vol. i, p. 91, No. 3, Pl. vi, No. 8; and pp. 99-100, Nos. 22, 23, Pl. vii, Nos. 1 and 2.

ment of Prints and Drawings in the British Museum, which was regarded as sufficient to entitle the engraving, when recently on exhibition amongst the selection of rare prints, to a provisional label naming the probable date of issue as "about 1588 or 1589". This suggestion was based on the fact that a map signed by Rutlinger was published in the *Mariner's Mirrour* in 1588,⁵ indicating that he was almost certainly working in England at that date, since the other engravers employed on this English translation, such as Jodocus Hondius and Augustine Ryther, although foreigners, were all resident in London.

As an engraver of prints little is recorded concerning John Rutlinger. Sir Sidney Colvin, however, suggests that he was perhaps of foreign parentage and known in England by the name of the locality whence he came. Sir Sidney writes that he was "probably a native of Reutlingen, or belonged to a family of that place".⁶ But be this as it may, and whether surname or alias, this name, Sir Sidney, writing in 1905, stated was unknown to him excepting through this map and the exceedingly rare portrait under discussion. But I may now venture to point out that the print is, as

⁵ Map of the coast of Galicia and Portugal in Sir Anthony Ashley's translation of Lucas Waghenae's *Spiegel der Zeevaert*. In the original Dutch and in the French edition this map was engraved by Joannes à Doetecum, but in the *Mariner's Mirrour* the maps were re-engraved under the direction of Theodor (Dirk) De Bry and the map in question is signed in full by "Joannes à Rutlinger".

⁶ *Early Engraving and Engravers*, by Sir Sidney Colvin, p. 41. This name would in all likelihood be given to our artist in England, to distinguish him from his colleague in the Mint—another John—viz. John van Landen, but our John bore also the alias of Eareth, as we shall presently see.

Sir Sidney clearly shows, the work of a goldsmith, and amongst metal workers the name does appear. Turning therefore to the more recent researches of Mr. Henry Symonds in the Mint Accounts, I feel justified in believing that the line engraver was no other than the under-graver at the Tower in the concluding years of Elizabeth and the earlier portion of James I's reign.

Mr. Symonds in his articles on the Mints of Queen Elizabeth, published between 1913 and 1917 in the *Numismatic Chronicle*, has given us various items concerning our artist.⁷

So far as my own small researches had already carried me, greatly assisted by those of Mr. Symonds, I had found but one record *earlier* than 1599 of Rutlinger's official employment at the Mint, namely in 1596-7.

It was not until the July of 1599 that Charles Anthony, who had for some time been receiving the fees and doing the work of his father Derick, obtained the regular patent of the office as principal graver, thus leaving presumably the appointment of under-graver free.⁸

In 1599 it is clear that Rutlinger was officially

⁷ *Mint of Queen Elizabeth and those who worked there. Num. Chron.*, Fourth Series, vol. xvi, and *Engravers of the Tudor and Stuart Periods, Num. Chron.*, vol. xiii, and also *Elizabethan Coinages for Ireland, ibid.*, vol. xvii.

⁸ Mr. Symonds writes in his *Mint of Queen Elizabeth*, p. 91. "Between 1589 and 1592, Derick's fees were received by Charles Anthony on behalf of his father, but in March 1593, Charles signs the receipt for the first time as holder of the office. Consequently I infer that he then became engraver *de facto* although he did not obtain a patent until 1599."

employed, for he is described as *subsculptor ferrorum* with George Tyson as *impressor ferrorum*.⁹ But I find at this date in the Exchequer Accounts¹⁰ a payment made to Rutlinger, under the head of "Allowance by Warrant" on the authority of Lord Buckhurst, then Lord Treasurer, for two and three quarters years' service at £20 per annum. A total of £55, terminating at Michaelmas 1599. He is then described as "Rutlinger, alias Eareth,¹¹ subsculptor infra Cambium". From this we must judge that he was employed at the Mint from Christmas 1596. The preceding Mint Accounts, terminating in January 1596-7, contain no mention of Rutlinger, and it seems clear that had he been employed earlier in 1596 the charge would have been noted.¹² But definitely this payment of eleven quarters carries us back to December 1596.

In 1600 the *Hatfield Papers* bring before us an interesting letter written by the Lieutenant of the Tower, Sir J. Peyton, to Sir Robert Cecil, then Secretary of State, under date May 26, speaking of "John Rutlyngham (*sic*), one of Her Majesty's gravers in the Mint, a most exquisite man in that kind of profession".¹³ Peyton, living in the Tower, would be in a position to

⁹ *Mint of Queen Elizabeth*, p. 92.

¹⁰ Public Record Office, Exchequer Accounts, Roll 296, No. 16. Running from February 29, 1596-7 to September 29, 1599.

¹¹ Query: should Eareth here read Earith in Huntingdon, or Erith in Kent, where our engraver may at one time have lived? Foreigners working in England, whose names did not run easily upon the British tongue, were still sometimes known not by their own surnames but according to the places whence they had come.

¹² Exchequer Accounts, 296/14 and 15, Public Record Office.

¹³ *Hatfield Papers*, published by Royal Historical Commission, vol. x, p. 158; see also *Mint of Queen Elizabeth*, p. 92.

see any work done at the Mint, and on behalf of Rutlinger he sends Cecil "some fruits of his labours for your approbation". Unfortunately we are not informed whether the "fruits", which the engraver according to Peyton desired to present, took the shape of coins, medals, or prints, but seeing that the recommendation came from the Tower, we incline to hazard a guess that the work would be in metal and might be connected with Cecil's counters or seals.¹⁴

Turning to Mr. Symonds' accounts of the coinage ordered by Elizabeth for Ireland in February 1600-1, we again meet with Rutlinger, as under-graver at "£40, now to be allowed as necessary".¹⁵ This was the base coinage which bore "the stamp of Her Majesty's arms crowned, with the inscription of her style on one side, and a harp crowned with the inscription 'Posui Deum Adjutorem Meum' on the other side".¹⁶

If at that period the rule practised in the reign of George II and his successors was already in force directing that the head-graver should make the dies for the obverse and an under-graver those for the

¹⁴ Cecil's only counter approximating to this date and now known to us, is in *Med. Ill.*, vol. i, p. 189, No. 6, and even this is dated in the year 1602, but it refers to his office of Master of the Court of Wards, which he held from 1599, and it is therefore possible Rutlinger might have submitted a pattern, later executed.

¹⁵ *The Elizabethan Coinages for Ireland*, p. 111. Indenture with Sir Richard Martin, discovered by Mr. Symonds in Pat. Roll, 43 Eliz., Part 6, m. 21.

¹⁶ It is of interest to see in the *Acts of the Privy Council* under date November 30, 1601 (vol. xxxii, p. 409), that of bullion lately taken from Spanish ships £5,200 was at that date allocated to the Irish Mint for the new coinage.

reverse,¹⁷ we might seek for Rutlinger's handiwork in the Irish¹⁸ crowned harps. But although already in the medals of the sixteenth century it is no unusual thing to find obverse and reverse by different hands, the fact that in the following century such artists as Briot and Simon made puncheons for both sides of coins discountenances the assumption of any such absolute division of labour in the English Mint in Tudor or Stuart times. However, in any case, a base coinage, such as the Irish, presents little help in the study of technique, and we rely chiefly on Peyton's assertion that Rutlinger's graving was "exquisite" rather than on any tangible proof of its quality. At some period in 1601, Mr. Symonds discovers that our artist was "temporarily retired in favour of John Baptist van Landen, who continued to assist Anthony until the end of the queen's life".¹⁹ We may note, however, that Rutlinger's fee for the half-year ending Midsummer 1601 was paid to him.²⁰ Moreover, it appears that he can only have been sick or seconded to some other mint employment, for the accounts of 1607 to 1608, comprising his salary for that year, mention also the payment of the "arrerages of his fee at xl^{li} p ann due to him for one whole year and three quarters ended at the feast of Thannuncacon of the blessed Ladye

¹⁷ See Croker's Memorial, Brit. Mus. Addit. MS. 18757, c. 13, also *Portraits of the Stuarts*, by Helen Farquhar, part vi, pp. 60-6. See *King's Warrants*, P.R.O., T. 52, vol. xxxvi, pp. 281-3, 1728-9.

¹⁸ See *Num. Chron.* 1917, Pl. VII, figs. 5, 6, 7, in silver illustrating Mr. Symonds' *Elizabethan Coinages of Ireland*, and in base metal figures 8, 9, 10.

¹⁹ *English Mint Engravers of the Tudor and Stuart Periods*, p. 359.

²⁰ Mint Accounts, Audit Office, Bundle 1595, Roll 5, P.R.O.

St Mary the Virgin 1603". This money was to be paid by a warrant dated January 7, 1607-8.²¹

In the reign of James I, Mr. Symonds, speaking of Charles Anthony's work in 1603 and 1604, continues: "John Rutlinger had now returned and apparently worked with John Baptist van Landen until the latter's decease or retirement in 1606".²² "After that year", he continues, "Rutlinger and John Dycher were 'inferiores sculptores' with a salary of £40, until the former died in 1609,²³ when Dycher worked for about ten years without a junior colleague."²⁴

I find in the State Papers Domestic Calendar under date 1603, but amongst undated manuscripts, a suggestion on the part of James I to admit John Acheson "in the place of John Rutlinger to the Office of under-graver of the Mint".²⁵

This may have been during his absence, for of his work between 1604 and 1606 I have found no record, and as James I's request is only conjecturally assigned by the calendarer to the year 1603, this entry does not materially assist our inquiries in that it may even refer to an unsuccessful candidate for the place after Rutlinger's death in 1609.

²¹ Mint Accounts, Audit Office, Bundle 1595, Roll 7.

²² It appears from these Mint Accounts, Bundle 1595, Roll 6, that Rutlinger and Dycher succeeded John Baptist van Landen on Lady Day, 1606—sharing his £40 a year between them.

²³ The last payment I find to Rutlinger is under date March 31. See *ibid.*, Roll 8, 1609.

²⁴ *English Mint Engravers*, p. 360.

²⁵ Calendar of State Papers, Domestic, 1603-10, vol. v, p. 60, No. 26. John Acheson was probably a member of the family who worked at the Scottish Mint between 1525 and 1611. Acheson was on May 10, 1603, accommodated with the place of King's Goldsmith. *Ibid.*, vol. i, p. 7, No. 74.

Our next meeting with Rutlinger's name is in connexion with a later Irish coinage than that above mentioned, namely, that of James I, in which it appears that Anthony lacked the co-operation of an under-graver and completed the work unassisted in 1604. I notice that instructions which were given to Charles Anthony "to engrave dies for the Irish coinage" on December 26, 1604, arrange for his receiving himself the payment of allowances "in his place of Under-graver, as lately held by John Ruslinger (*sic*) till John Baptista was appointed to the place".²⁶ From this it would appear that Rutlinger's employment was subject to another eclipse at some date between December 1604 and 1606, although Mr. Symonds believes that he was working with John van Landen.²⁷ We may, however, note that the change above mentioned, from Rutlinger to John Baptista, may concern the Irish coinage only. To epitomize the above dates we have evidence that our engraver was almost certainly in England in 1588 to 1589 when he engraved his map in 1588; in 1596 to 1599 he was in receipt of £20 a year as under-graver; in 1600 Peyton writes to Cecil about him from the Mint; in 1600-1 he begins his work on the Irish coinage at £40 per annum, and between this date and Lady Day 1603 he earns £90 in two years and a quarter, receiving the arrears, amounting to £70, in 1607-8. Mr. Symonds finds him again engaged upon the Irish currency between 1603 and 1604, and there appears to be some doubt as to his movements in 1605, but he is regularly paid at the Mint again from

²⁶ State Papers, Domestic, 1603-10, p. 179. Docquet at the Public Record Office.

²⁷ *English Mint Engravers*, p. 360.

1606 to 1609, the year of his death, the last payment being in the March of the latter year.

But we have followed Rutlinger's history far into the reign of James and must return to his line-engraving and the phoenix medal, the reverse of which our artist figures in Elizabeth's hand.

The phoenix in flames was a favourite device with the admirers of Elizabeth from the time of her accession.

On progress in 1578, the queen was greeted at the gate of the city of Norwich by a display of mixed emblems.²⁸ The phoenix, "her highnesses' badge", figured prominently, and roses, red, white, and parti-coloured, as we see them on the Phoenix Jewel, symbolized unity and her Tudor birth. Possibly to this period we might attribute the painting in the National Portrait Gallery, in which Elizabeth is seen wearing a jewelled collar with a large rose in the centre, from which hangs a white enamel phoenix sculptured in the round. This ornament, alas, is not amongst those which have survived to our day, but it can be well studied in the picture.²⁹

²⁸ Holinshed, vol. iii, part ii, pp. 1287-9.

²⁹ No. 190. The queen wears a small ruff and sleeves almost of the shape seen in a dated miniature of Elizabeth of the year 1572, but the change in fashion was not so rapid as to preclude the possibility of any date within that decade. A print drawn by G. P. Harding and engraved by W. Greatbatch, which was published in 1839 from No. 190, then in private hands, stated that the painting was the work of Hilliard, but it is more likely that it was a contemporary version of some miniature by this artist. The above picture was not exactly copied by Rutlinger. It has a smaller ruff and slightly different clothes—the hands are not similarly placed and there is only a rose in the right, but the queen wears a veil in both and the head-dress is nearly identical.

Again, William Rogers in the margin of his engraving, portraying her at about the date tentatively assigned to Rutlinger's print, introduced the phoenix as an emblem. Rogers shows the magnificent dress in which Elizabeth attended the thanksgiving service at St. Paul's Cathedral after the defeat of the Armada. He decorated the corners of his design with two little drawings, the one of a pelican feeding her young, the other the phoenix, typical respectively of Elizabeth's maternal care for her people and her virginity.³⁰ This phoenix, drawn by Rogers, is not unlike that so frequently seen upon her medals, but it is not precisely the same in design or detail.

But the phoenix medals cover a long period and begin as we have seen with the year of her accession, when three varieties of a medalet appeared with youthful busts of the queen on the obverse, and the phoenix on the reverse.³¹ These Mr. G. F. Hill, in his invaluable *Medals of the Renaissance*,³² has conclusively connected with the name of Derrick Anthony, on the ground that another jetton commemorating the new coinage of 1560³³ bears the same obverse as the "Sola

The fan is of the type presented to Elizabeth by Leicester in 1574. Elizabeth was fond of symbolical jewels and frequently gave or accepted presents shaped according to nicknames she used in speaking to her friends, such as a "fish-prison" typifying Raleigh, whom she called "Water", or a frog to represent Anjou.

³⁰ *British Engraved Portraits*, vol. ii, Elizabeth, No. 88.

³¹ *Med. Ill.*, vol. i, p. 90, Nos. 1, 2, and 3. Pl. VI, Nos. 7, 8, and 9.

³² *Medals of the Renaissance*, pp. 153-4. Mr. Hill points out that Anthony in making the medalet of 1560 struck the portrait side from the die of one of the earlier pieces.

³³ *Med. Ill.*, vol. i, p. 99, No. 22, with Justice on the reverse, Pl. VII, No. 1.

Phoenix", No. 3. Mr. Hill remarks that Anthony's responsibility might be confined to "the designs of the head on the Phoenix medalet even if one of his assistants executed them". But this assistant would not be likely to be our artist, for we have no proof that Rutlinger was employed at the Mint in any capacity at a period when the queen's face was still youthful; indeed, the likelihood is, as we have shown, quite the other way. We do not certainly know the year of his birth, but we do know that at the time of his death in 1609 he had not been permanently retired through superannuation from work, and this was some half-century after Elizabeth's accession;³⁴ moreover, Peyton's recommendation to Cecil in 1600 is suggestive that he was still a rising artist rather than a man in declining years. There is, however, an engraved jetton of larger size which might possibly be the work of Rutlinger.³⁵ (See PL. XIII. 3.) The obverse shows the queen with hanging veil and large ruff somewhat in the fashion of, although not quite equally meticulous in style with, the line-engraving by Rutlinger. Apart from the somewhat elderly portraiture, it may be surmised from its resemblance to a similar round plaque in the British Museum representing Roland du Jardin and bearing date 1586,³⁶ that the Elizabethan jetton belongs to one of the two

³⁴ "Engravers of the Tudor and Stuart Periods", *Num. Chron.*, 4th Series, vol. xiii, p. 360.

³⁵ Lot 8, Murdoch Sale, Sotheby's, June 2, 1904, where it was catalogued as of the year 1558, but on what evidence is not apparent, and the electrotype from it in the British Museum is labelled "circa 1590" on grounds of portraiture.

³⁶ *Med. Ill.*, vol. i, p. 136, No. 93.

copies as being, at the time he wrote, in private collections, but one of them is now in the trays of the Museum. Sutton Nicholls, also an engraver of the mid-eighteenth century, made another copy of the Phoenix Badge, as we are informed in *Medallic Illustrations*.⁴¹ This specimen is therein described as having an ornamental border. I have not seen this bordered example, so I cannot tell whether Nicholls aimed at imitating the ornamental setting shown by Rutlinger in his print or the beautiful "Jewel" enclosed in its enamel wreath of roses, typical of the Tudor princess.⁴²

Let us glance for a moment at the "Jewel" and see wherein it differs from this "Badge". It has frequently been described as though it had been cast in gold from the same mould as the silver version and the background cut away in such a manner as to leave the queen's head on the one side standing clear, whilst the phoenix, the flames, the monogram, and the crown cover a corresponding space on the other face. But this is not quite accurate; the measurements are *not* the same; the position of the bird's wings is entirely different, and had the cast flan been cut away, the queen and the bird would not have come out in the present relation, the one to the other. The monogram and the crown also are considerably larger on the "Jewel" and differ in shape from those on the "Badge". Mr. Hawkins in his manuscript notes, after describing the "Badge", turns to the "Jewel",

⁴¹ Sutton Nicholls, line engraver of the first half of the eighteenth century, engraved a view of London for Stowe's *Survey*, published in 1725. His copy of the Phoenix Badge is described as undated but signed.

⁴² The Rose symbol was used by William Rogers in his *Rosa Electa* print, and also appeared in the heraldic device of the Tudors from the union of Henry VII with Elizabeth of York.

and writes: "This is the above medal converted into a handsome ornament", and these words have been mistakenly construed in later days as meaning not the design simply, but the actual medal.⁴³ That the "Jewel" was cut from some round and specially arranged example, made by a jeweller of the same date, or approximately so, is obvious, for it is indeed on a cast flan, and it is clear that the phoenix on the reverse was finished before the field in front of the queen's face was cut away. This fact is made apparent by the destruction in the process of a curl of smoke from the bird's funeral pyre. I should be inclined to suggest that Elizabeth looks a little older, and certainly firmer and more intelligent, in the "Jewel" than in the "Badge", but this may be owing to the more expressive turn given to the sensitive mouth and imparted to all the queen's features by the artist of the highly finished ornament. Considering that Elizabeth never desired that any portrait should represent her as an old woman, it seems rash to attach too much importance to any slight alteration in her appearance as portrayed in the jewel and the badge, for both must certainly have been intended to meet her eye, either as presentations to her or from her. If, therefore, the maker of the "Badge" copied a portrait of the conventional type, and the "Jewel" was the idealized

⁴³ See *Med. Ill.*, vol. i, p. 125, No. 71. "A singularly beautiful ornament has been formed by cutting out of a gold impression of the medal described, so much as contains the portrait on one side and the device on the other." This is a not unnatural construction to be put upon the words of Mr. Hawkins by even so careful a student as Sir W. Franks, for unless the two pieces, which are in different departments of the Museum, were placed side by side, as by the courtesy of their respective custodians I have been privileged to place them, the general similarity of the designs appears great.

work of a better artist, such slight differences would naturally occur even if both were executed at about the same date. We know that Theodor [Dirk] De Bry⁴⁴ and his sons Johannes Theodor and Johannes Israel were noted for their drawings intended for goldsmith's work, which placed them in the front rank as designers for enamels. One feels that the maker of the Phoenix Jewel could hardly be a copyist, and the question naturally arises whether it is possible that the elder De Bry designed and carried out the superior ornament, whilst his assistant Rutlinger, working on his own rendering of the same theme, produced the Phoenix Badge. Had the artist of the enamelled "Jewel" been Rutlinger, he would surely have dwelt more elaborately on the border of roses in his print instead of showing the reverse of the plainer badge. Had the two been really made from the same drawing the relation between the obverse and reverse, the shifting of the queen's head and shoulders, and the position of the bird's wings would probably have been preserved in both. We know that Theodor De Bry worked in England in 1586 to 1587, and in 1588 to 1589, but have we any evidence that the "Jewel" is of that date? Moreover, in spite of the various drawings for jewels which suggest the work of a goldsmith, have we any direct proof that he actually carried out his own ideas? I have not found a phoenix amongst the birds shown in his designs at the British Museum or in the books which he illustrated. But we have

⁴⁴ Theodor died at Frankfort in 1598 and his sons, the elder in 1623 and the younger in 1610. Theodor paid two visits to London, in 1586-7 and again in 1588. According to Sir Sidney Colvin it was on the occasion of the second visit that he engraved for Sir Anthony Ashley.

said enough of the "Jewel", one of the original treasures of the British Museum, which formed part of Sir Hans Sloane's cabinet, the nucleus of the National Collection in 1753. And I trust that I have shown that the structural differences between the enamel and the silver badge are so great that the two cannot have been cast from the same mould, whilst their technique does not point to the hand of the same artist.

But was Rutlinger, in portraying the queen holding the Phoenix Badge in her hand, gently calling her attention to his own work as a goldsmith in the hope of obtaining employment at the Mint? The print is, according to portraiture, rather later than the silver badge and later also than the Phoenix Jewel.

Considerable doubt has been expressed concerning the dictum of John Evelyn that the "Badge" was made in 1574.⁴⁵ The figures are incised on a specimen in the British Museum, but they do not appear on other examples, and are not in the plates of Evelyn, of Luckius, Pinkerton, Perry, nor of Van Loon. The date was, as has been remarked by Mr. Hill,⁴⁶ probably added by some one who accepted a tentative statement made by John Luckius in his *Sylloge Numismatum Elegantiorum*, published in 1620.⁴⁷ This book might well have been known to Evelyn, who adopted the suggestion of Luckius without question, even to the repetition of an error in the illustration, turning the queen's head to right, instead of to left as in the original badge. Curiously enough the phoenix reverse was in both cases accurately rendered to left.

⁴⁵ *Discourse on Medals*, published 1697, p. 93.

⁴⁶ *Medals of the Renaissance*, p. 155.

⁴⁷ Luckius only says, "Circiter Annum Christi—1574". See p. 255.

last decades of her reign and is about contemporaneous with the print. But whether or not this circular engraved plaque, with its phoenix reverse, be connected with the artist of the print, it is certainly not the object depicted in the queen's hand in the line-engraving, which appears to be the reverse of the Phoenix Badge; neither does the plaque throw any light on the cast badge, probably originally modelled in wax.

Let us pass, therefore, to this well-known silver "Phoenix Badge" (*Medallic Illustrations*, vol. i, p. 124, No. 70, see our Pl. XIII. 2), and the far more splendid "Jewel" (*Medallic Illustrations*, vol. i, p. 125, No. 71, see our Pl. XIII. 1). The "Badge" is preserved in the Medal Room at the British Museum, whilst the "Jewel" is one of the treasures of the Mediaeval Department, where by the kindness of Sir Hercules Read I was permitted to examine it. Both badge and jewel bear the portrait of Elizabeth, her bust is turned to left on each obverse, and both are decorated with a phoenix, also to left, on the reverse, surmounted by the queen's monogram and crown.

The "Jewel" is without inscription, the whole background being cut away, and the gold bust surrounded by an enamelled wreath of coloured leaves and roses, symbolic of the Tudor queen. The wreath is not reproduced in the line-engraving, where a setting of diamonds encircles the phoenix in flames on a plain field, not cut clear as in the actual jewel. The silver badge, No. 70, has close lettering on both sides, such as might easily be covered by the diamond setting figured in the picture. The medal, moreover, which is cast and chased, shows a line between the field and the inscription in a manner which suggests that the wax was

originally designed without the lettering, which was separately impressed by the artist.

The inscriptions on the badge read as follows. On the obverse: ³⁷

+ HEI MIHI QVOD TANTO VIRTVS PERVSA DECORE
NON HABET ETERNOS INVIOATA DIES.

And on the reverse: ³⁸

FELICES ARABES MVNDI QVIBVS VNICA PHOENIX
PHOENICEM REPARAT DEPEREVNDO NOVAM.
O MISEROS ANGLOS MVNDI QVIBVS VNICA PHOENIX
VLTIMA FIT NOSTRO TRISTIA FATA SOLO.

Both legends appear to deplore the virginity of the queen, or allude to some danger past or present, and embody the oriental salutation, "O King, live for ever".

There are spurious imitations, slightly larger in size, with more stops between the words, much elaborated and over-chased. These the late Edward Hawkins in his private notes attributed to the copyist Stuart, who in the mid-eighteenth century is reputed to have made conventional and hard renderings of extant rarities. ³⁹

Mr. Hawkins ⁴⁰ mentions the highly chased modern

³⁷ "'Tis sad that such beauty and such worth should be corruptible, nor live for aye."

³⁸ "Happy the Arabs whose only Phoenix begets in death a more glorious Phoenix. Unhappy the English whose only Phoenix in death shall be for ever lost to earth."

³⁹ We may hope that Stuart is not responsible for all the copies that have been imputed to him, but he is best known by his works after the brothers Simon.

⁴⁰ Mr. Hawkins, curator at the British Museum from 1826 to 1860, jotted on loose sheets material for his original manuscript for *Medallic Illustrations*, and his collected notes are now preserved in the Department of Coins and Medals.

Francis Perry, in his *Series of English Medals* published in 1762, on his Pls. IV, fig. 2, and V, fig. 3, Pinkerton in 1790 on his Pl. VII, Nos. 4 and 8 of his *Medallic History*, and Van Loon, in his *Histoire Metallique*, vol. i, p. 558, are correct in showing both head and phoenix to left.⁴⁸

Luckius, as Mr. Hill points out, describes the badge as "a votive medal of the estates of the Kingdom of England made in honour of their Queen Elizabeth, after the winning of certain noble victories against the Spaniards about the year of Christ 1574".

"He may", continues Mr. Hill, "have been going by some tradition, but one would like to know what were the victories over Spain of which he was thinking."⁴⁹ If Luckius had any traditional reason for connecting this design with Spanish defeats by the English, those which occur to us as most marked are of the years 1579 to 1581 and 1585 to 1588. In July 1579 disaster befell Spanish ships at Smerwick in Ireland during Desmond's rebellion. In 1581 Drake was knighted in recognition of the booty he had obtained in 1579. In 1585 to 1586 his successful piracy continued. 1587 is the date of the historic "singeing of the King of Spain's beard" at Cadiz by Drake, and 1588 that of the defeat of the Armada, and this is the period to which Rutlinger's print of the queen holding the phoenix medal is tentatively assigned. Van Loon puts forward a suggestion that the badge was a memorial on the queen's death in

⁴⁸ By an unfortunate illustrator's error, Elizabeth's bust appears to right in one of the best-known books on jewels. See *Jewellery*, by H. C. Clifford Smith, Pl. XXXV, fig. 1, and at his request I mention this accidental reversal of a photograph of the Phoenix Jewel. Miss Joan Evans, in her more recently published *English Jewellery*, gives an excellent illustration of it. Plate XIX, No. 6.

⁴⁹ *Medals of the Renaissance*, p. 155.

1603. Renold Elstrack, it is true, introduced a phoenix into a memorial drawing under date March 1602-3 with the words applied to Elizabeth: "Shee was, shee is, what can there more be said." But this panegyric was no reflection on the queen's successor, whereas we can scarcely believe that any courtly artist would so clearly suggest as do the words of the Latin legend on the badge, that a second phoenix could not arise in the person of James I. Francis Delaram also made an engraving on Elizabeth's death with the phoenix device, but neither print recalls the badge nor bears any inscription uncivil to the new king.

We might apply almost any date to one of the suggestions made by Mr. Hawkins that the medal refers to the discussions, not always in very good taste or temper, between Elizabeth and her subjects on her celibacy, of which the phoenix was the emblem. From the time she declined the offer of Philip II in 1559, Elizabeth coquetted first with one and then with another, and she did not permanently lay aside all thought of matrimony until she was between 55 and 60 years of age. In 1570 to 1571 she was flirting with Henri, Duke of Anjou, afterwards Henri III of France. He, in January 1571-2, rejected the alliance, and then negotiations were commenced with Hercules, Duke of Alençon, who visited her in England as her betrothed in 1582.⁵⁰ In 1581 Elizabeth had let it be definitely supposed all over Europe that she was about to marry, and William Cecil said of her: "Here is great resort of wooers and controversy among lovers. Would to God the Queen had one and the rest honourably satisfied." But flirting with her subjects or negotiating with foreign

⁵⁰ Alençon afterwards assumed the title of Anjou on Henri's accession to the French throne.

princes, Elizabeth never had any serious intentions in that direction, and on her accession had declared that she wished the inscription on her tomb to run: "Here lies a Queen that lived and died a virgin."

Mr. Hawkins again suggests the escape from plague as a possible solution of the ambiguous legend. He specially mentions, in connexion with plague, the year 1574, the date selected by Luckius and Evelyn as that of the medal. But here again the danger was equally rampant in 1563 to 1564; in 1569 and 1570, in 1575, 1576, 1577, and 1578, again in 1580 and 1581, and in 1589 and 1592-3, as is testified by proclamations⁵¹ against "Access to Court". Again, the queen escaped a danger of another kind of death, when in 1578 a shot aimed at Simiers, the French envoy, struck one of the rowers of the boat in which Elizabeth was seated. Mr. Hill very helpfully suggests that in September 1572 political perils prevailed and Elizabeth recovered from an attack of smallpox.⁵² But here again the allusion to the evanescence of beauty would hardly be a tactful suggestion to one who had scarcely escaped the ravages of so disfiguring a disease; and the queen had been far more dangerously ill earlier in the same year, i.e. in March 1571-2, from internal inflammation, when for three whole nights her life was in the balance. Again, as regards 1574, Mr. Hawkins lays particular stress on the simplicity of the queen's costume, referring to the ukase published in that year enjoining a less ornamented style of dress upon her

⁵¹ See Earl of Crawford's *Bibliotheca Lindesiana, Catalogue of Tudor and Stuart Proclamations*, vol. i, Nos. 593, 643, 691, 695, 696, 708, 719, 722, 723, 724, 725, 729, 746, 814, 854, 860, 861. That of 1574 is Crawford, No. 691.

⁵² *Medals of the Renaissance*, p. 155.

subjects. I have, however, in Humphrey Dyson's *Book of Proclamations*, noticed no fewer than eleven proclamations against "Outragious Excesse in Apparell" at various dates, beginning with the first year of her reign, and those of later date, 1572, 1574, 1576-7, 1579-80, 1587-8 and 1597 would equally fit the case.⁵³ Moreover, is the medal so much less ornate than the majority of her presentments? The partlet or chemisette, as we should now call it, is certainly of soft muslin folds, but this may be only to give room for the goldsmith's love of jewels, so magnificently rendered on the golden ornament and indicated on the badge. The sleeves are very ornate, carrying us to her portraits from about 1570 to 1580, but still seen on her coinage in 1601. The same may be said of her coif, rarely shown upon her coins, and then only towards the end of her reign in the crowns and half-crowns bearing mint-mark l. It was more usual to portray the queen "in her hair", a sign of virginity, but Elizabeth was said to possess eighty coifs at the time of her death, and one of the shape seen on the Phoenix Badge is also on the Armada Jewel of 1588.

The small ruffs of the coinage are of course more suitable to the profile portraits, but the patterns dated 1601 (Ruding, xv, 9 and 10) break away from this tradition, being almost full-faced, with an open collar, and curiously enough show a fairly young portrait of the queen, much like the phoenix medalet of Eliza-

⁵³ Dyson's list, published in 1618, gives reference to folios 13, 14, 47, 50, 94, 154, 163, 196, 252, 343, and 348. Dyson's list is bound up with the proclamations of Elizabeth in the Library of the Society of Antiquaries. See also *Catalogue of Tudor and Stuart Proclamations*, vol. i, Nos. 515, 516, 517, 562, 563, 569, 675, 690, 717, 745, 798, and 890.

beth's accession,⁵⁴ and the same monogram on the reverse as we find on the Phoenix Badge and Jewel.

Mr. Hill concludes his interesting remarks about the Badge as follows: "Whatever its date, as the medal is cast from a wax model, we cannot easily compare it with the official coinage of the time or form any idea whether it is the work of one of the mint engravers." If I may venture to discuss the opinion of one whose knowledge of medals is unrivalled, might I, whilst agreeing with the pronouncement of my friend and guide, Mr. Hill, that the technique of the modeller in wax is far removed from that of the die sinker, submit that there is probability that the maker of the medal was, if not the holder of office at the Mint, an aspirant for official employment? Also, that engravers of prints were not uncommonly goldsmiths, designers of medals, cutters of seals, combining such professions with that of "Drawer for the small portraits", like Nicholas Hilliard, "miniaturist and embosser of medals of gold", who only withdrew his application for the appointment of chief engraver at the Mint in favour of his friend Charles Anthony. Further, that the date of the print by Rutlinger is plausibly assumed to be *circa* 1588-90, and that he did not obtain official recognition at the Mint until Christmas 1596. Have we perhaps in the engraving an endeavour to advertise his capabilities as the maker of a medal designed by himself some years earlier, whether in commemoration of one or other of the events referred to by various writers? We have seen that it is not easy to date the medal, and whilst the jewel would be particularly applicable to the queen's

⁵⁴ *Med. Ill.*, vol. i, p. 90, No. 2, and Pl. VI, No. 8; Ruding, xv, Nos. 11, 12, and 13 preserve the crowned monogram.

visit to Norwich in 1578 and the peace enjoyed by the refugee Netherlanders, who established their trade under the wings of the British phoenix, the Tudor Rose, it would not be inappropriate to the defeat of the Armada at approximately the date when Theodor De Bry and Rutlinger were working together in England. The meteoric nature of Rutlinger's appearances allows of the possibility of his presence in this country in 1578, although not officially employed at the Mint until the end of 1596.

HELEN FARQUHAR.

P.S.—Since going to press, I find amongst *Returns of Aliens in London*, compiled from various manuscripts of the reigns of Henry VIII to James I, that the name of Rutlinge or Rutling was noted in 1567 and 1568. In the former year we find Erat Rutlinge, a "Dutchman", had been resident in England seven years. In 1568 "Eryte Rutling" and also "John Rutling" are described as "Duche persons", "goldsmys", and "denizens". The two latter are accompanied by their wives, and therefore it is more likely that if for "Rutling" we read "Rutlinger" we have here relations of our John Rutlinger, rather than the man himself, who, receiving a Mint undergravership so late as 1596, is not likely to have been old enough to be a married man in 1568. If, however, Eryte Rutling was our John Rutlinger's father, we have an explanation of his alias "Eareth". See Huguenot Society's Publications, Vol. X, Part I, No. 325, and Part III, pp. 434 and 437. Both Eryte and John are described as attending the "Englishe church", and were therefore clearly proficient in our language.

H. L. F.

XIII.

NOTES ON INDO-GREEK NUMISMATICS.

[SEE PLATES XIV-XVII.]

THIS paper was inspired by a remarkable find of Indo-Bactrian tetradrachms, which was made in the neighbourhood of Kābul about the beginning of the year 1917, and came into my hands. My coin collection is now in the British Museum, but Mr. G. F. Hill, Keeper of the Coins, has generously allowed me to describe the specimens concerned. I record some general observations, based on my sixteen years' experience as an active collector in the Punjab, on the position and extent of the dominions of the Bactrian Greeks in India under Heliocles and his successors, as deduced more especially from the find spots, distribution, and monograms of their coins. The tentative dates of Heliocles and Hermaeus respectively are 135 and 25 B.C. (*C.H.I.*, pp. 700-1). In my capacity either as Honorary Numismatist to the Punjab Government, or as a private collector, I remained in constant touch with the dealers on the North-West Frontier, with museums, and with collectors in other countries.¹ I have continued to gather

¹ I was one of several collectors of Muhammadan coins, but throughout my time of active acquisition had no private competitor in India for Greek coins. In this respect I commenced just when Mr. (later Sir Lucas) White King, Mr. G. B. Bleasby, and Mr. J. P. Rawlins ceased to collect.

material since the production of my Punjab Museum Catalogue, published in 1914 at the Oxford University Press, and can amplify the lists of types given in that work. For permission to describe individual coins I am indebted to the kindness of the Keeper of the Coins, British Museum, the Conservator of the Coins, Bibliothèque Nationale, Paris, the Director of the Coin Cabinet, Kaiser Friedrich Museum, Berlin, and of the private collectors named in the text.

LIST OF ABBREVIATIONS.

- A.* Gold. *Æ.* Silver. *Æ.* Copper or bronze.
B.M. British Museum.
B.M. i. From the author's Collection, now in the B.M.
B.M.Cat. Coins of the Greek and Scythic Kings of Bactria and India in the British Museum, 1886.
C.A.I. Coins of Ancient India. A. Cunningham.
C.H.I. Cambridge History of India, vol. i, 1922. The author has used the same transliterations of names.
C.I.S. Coins of the Indo-Scythians. A. Cunningham. *Num. Chron.*, 1888.
C.S.A. Coins of the Successors of Alexander in the East. A. Cunningham. *Num. Chron.*, 1868, &c.
Gr. Greek.
I.M.Cat. Indian Museum Catalogue, vol. i.
J.A.S.B. Journal of the Asiatic Society of Bengal.
J.R.A.S. Journal of the Royal Asiatic Society.
Kh. Kharoshthi.
l. left (of reader).
mon. monogram.
Num. Chron. Numismatic Chronicle and Journal of the Royal Numismatic Society.
Pl. Plate.

P.M.Cat. Punjab Museum Catalogue, vol. i.

r. right (of reader).

S. size (in inches).

sq. square.

w. weight (in grains).

The first volume of my Catalogue of Coins in the Punjab Museum, Lahore (Oxford University Press, 1914), treats of what I called Indo-Greek coins; I used the label as a convenient generic term for money bearing legible inscriptions in Greek characters, issued in Bactria, the Kābul valley, and North-West India by the Bactrian Greeks and succeeding foreign dynasties down to and including Vasu Deva, last of the Great Kushāns. It is advisable to find another appellation for the coins of those princes of Bactrian descent with Greek names who struck bilingual issues in the Kābul valley and the North-West Punjab. I will use the term Indo-Bactrian, or alternatively Yavana, the Indian name for the Greek invader (*C.H.I.*, p. 540).

Apart from one or two casual references in classical authors, coins are the only material we possess for the reconstruction of the history of Alexander's successors south of the Indian Caucasus (Hindu Kush).² The most recent work is embodied in the admirable and authoritative accounts by Dr. George Macdonald and Professor E. J. Rapson in Chapters XVII and XXII of the first volume of the *Cambridge History of India*, 1922. The Bactrian coins in gold and silver show

² There has been no systematic expert investigation or excavation in N. Afghānistān, a country closed to European intercourse since the First Afghan War (1841), when scientific archaeology was in its infancy. A French Archaeological Mission under Monsieur A. Foucher is now working in the Kābul valley.

that the Attic standard of weight had been preserved with a ratio of ten silver to one gold, the full weights of the gold stater, the silver tetradrachm, and the silver drachm being 135, 270, and 67.5 grains respectively. "Suddenly we find that the silver coins of the sixteen kings who followed Eukratides have become heavier, the average weight of sixteen didrachms having become 146.3 grains, while that of eighty-two hemidrachms had risen to 36.48 grains. As many of the latter are over 37 grains, I take this to be the full weight of the hemidrachm, while that of the didrachm must have been up to 148 grains". The tetradrachm on this scale would weigh 296 grains, or one-tenth in excess of the Attic standard, and the relative value of gold to silver had become as eleven to one. In Kushān times it had appreciated to twelve to one, *C.I.S.*, pp. 216 f. This is Sir Alexander Cunningham's explanation of the change in standard, which he maintains had been manipulated from the point of view of the gold exchange, but this surmise is of an academic nature, because for practical purposes the Indo-Bactrians and Indo-Scythians did not strike gold, and the Kushāns coined no silver. Two other explanations are mentioned by Cunningham, *C.I.S.*, p. 221. von Sallet (in *Die Nachfolger Alexanders des Grossen*, Berlin, 1879) calls the silver coins with native (Kharoshthī) legends a reduced standard, by which he meant the 37 and 148 grain coins to be reduced drachms and tetradrachms. Professor Gardner looked upon them as belonging to some Persian standard (*B.M.Cat.*, p. lxviii), but they do not conform with that standard; Cunningham was not aware of any Persian standard comprising coins of these

weights. Following Cunningham, I called the Bactrian silver coins tetradrachms and drachms, and the Indo-Bactrian silver issues didrachms and hemidrachms, but I have changed my views, because his theory involves a complete break in continuity between the Bactrian and Indo-Bactrian coinages. One currency grew out of the other, and there was overlapping, coins of both standards being struck by Demetrius (Pl. XIV), Apollodotus (*B.M.Cat.*, p. 34), Eucratides, Heliocles, and Antialcidas. Cunningham's hypothetical Indo-Bactrian tetradrachm of 296 grains does not exist. Hence it is natural to hold that the heavy Indian silver coins succeed and correspond with the Bactrian tetradrachms, that is to say, they are Indo-Bactrian tetradrachms, while the lighter coins of one-quarter the weight are Indo-Bactrian drachms.³ Economic reasons favour this hypothesis. The Bactrian conquerors had to satisfy a demand for money acceptable to both Greek and Indian traders; the Indians were accustomed to a comparatively small silver piece. Why should the victors, those who were able to impose their will on their new subjects, suffer a loss by striking the new money on a standard heavier than their own (tetradrachm 296, didrachm 148, hemidrachm 37 grains)? The advantageous course was to strike hybrid coins on an arbitrary standard smaller than either the Bactrian or Indian, and to make a profit by this debasement of the currency. The reduced scale does not seem to be related to any of the known standards. Indian influence manifested itself by a change in weight,

³ A conclusion already arrived at by Herr von Sallet.

shape, and style, also by the addition on the reverse side of a literal translation of the obverse Greek superscription into the Indian colloquial (*Kharoshthī*). The drachm of Menander can weigh as much as 39 grains, though the heaviest Indo-Bactrian tetradrachm in the British Museum Catalogue weighs only 151.4 grains.⁴ The heaviest tetradrachm from the find I am about to describe weighs 151.6 grains. The full weights of the Indo-Bactrian tetradrachm and drachm are at least 152 and 38 grains respectively.


Euthydemus I was the first Bactrian king to cross the Hindu Kush; his invasion of the Kābul valley amounted to an effective occupation (*C.H.I.*, p. 444), but the change in the coinage dates from the reign of his son and successor Demetrius. What] was the indigenous Indian money in North-West India at this period? Gold was abundant in the Indus valley, but no specimen of ancient gold money has come down to us.⁵ Cunningham remarks that the gold money in circulation in North-West India down to the time of the Kushāns must have consisted of the staters of Alexander, Seleucus, Antiochus, Diodotus, and Euthydemus. Perhaps in his day a stater or two of the first two kings may have been found in India, but I do not know of any such discovery. The last three are amongst the great rarities in India; Sir John Marshall dug a stater of Antiochus out of the Bhīr mound at Taxila; the total number of the known staters of Diodotus and

⁴ Professor Gardner says that these weigh as a maximum 160 grains (*B.M.Cat.*, p. lxviii). This weight seems excessive.

⁵ This is literally true of the punch-marked type. Two or three Taxila gold coins are known (*C.A.I.*, Pl. ii, 18). I had one, and passed it on to the Indian Museum, Calcutta.

Euthydemus found in both Bactria and India cannot amount to thirty; only two gold coins of Eucratides are known. Again, Cunningham observed that the paucity of gold coins amongst the Indian Greeks may be explained by supposing that the old Persian darics had remained current in India down to the beginning of the Christian era (*C.I.S.*, p. 219): but even of these only isolated specimens have been picked up sporadically (*C.H.I.*, p. 343). Hence if gold had a monetary use, it must have circulated as ingots, or in the shape of small packets of gold dust of fixed weight (*C.A.I.*, pp. 5 f., 48 f.). The silver currency consisted of the so-called punch-marked coins, of an indeterminate shape approximating to square or rectangular; they are common to this day all over the sub-continent, so must have been struck in great numbers during a long period commencing probably two or three centuries before Alexander's time (*C.A.I.*, pp. 3, 19 f.). The punch-marked coins are essentially a one-denomination currency based on a theoretical weight of 58.56 grains (Rapson, *Indian Coins*, p. 2), though the usual average is from five to ten grains less. Subdivisions of the *purāṇa* are extremely rare. The only heavy silver coins of an ancient type are the so-called "bent bars" (*I.M.Cat.*, p. 136), a special class which probably had a very local circulation somewhere in Gandhāra. Copper punch-marked coins are very rare, but were reinforced in Gandhāra by the square Taxila copper currency, and elsewhere by the tribal and local issues.

Demetrius, successor of Euthydemus I, extended the Bactrian conquests into the North-West Punjab and down the Indus valley. This increased intimacy with the Indians resulted in the striking of a bilingual cur-

rency on the new weight standard in silver (Pl. XIV. 2) and copper (*P.M.Cat.*, Pl. i. 26). The unique silver piece is a tetradrachm, while the copper coin is of the square shape characteristic of India at that period. Gold coins of Demetrius are unknown. The Indianization of the currency has a different result in the cases of the obscure group Agathocles, Pantaleon, Antimachus Theos, and Euthydemus II (*C.H.I.*, pp. 447 f.), all of whom except Antimachus Theos struck both kinds of money.⁶ Eucratides reigned on both sides of the Hindu Kush, and issued a splendid Bactrian and Indo-Bactrian currency bearing the triumphant design of the charging Dioskouroi. Eucratides had headed a successful revolt in Bactria against Demetrius, whom he pursued into India. Justin tells us that he reduced India, that is to say, the country of the Indus, to subjection, and Strabo says that he made himself master of a thousand cities (*C.H.I.*, pp. 446, 455). Only two gold coins are known, a twenty-stater piece and a stater, both of the Bactrian kind. I describe and illustrate the latter (Pl. XIV. 4). The former is one of the treasures of the French National Collection, and is the largest gold coin of antiquity (*Rev. Num.*, 1867). So massive a piece must have been struck not for monetary but for commemorative purposes. It is curious to note that, though found in the Oxus region, this splendid medal bears a monogram  found on no other Bactrian piece, not even of Eucratides himself, but quite characteristic of the Indo-Bactrian money struck by Menander, probably in Gandhāra (*v. infra*). Cunningham suggests that

⁶ I do not think Antimachus Theos can be identified with Antimachus Nikephoros (*C.H.I.*, p. 547), for reasons given below.

this monogram may represent Peucolaotis, the modern Chārsadda. I am tempted to surmise that the medal was struck in India to commemorate Eucratides' Indian conquests. The Indo-Bactrian money of Eucratides consists almost entirely of bilingual square copper coins of the sort inaugurated by Demetrius; there are just one or two round bilingual silver coins of the hybrid drachm size. Eucratides restruck a square copper coin of Apollodotus; Menander and Apollodotus are the only two Indo-Bactrian kings mentioned by classical authors. All the money of Apollodotus is of Indian types, and there is no reason to believe that he ever held any part of Bactria. However, he struck a few small round silver coins, weighing about 31 grains, which are in a class by themselves; though of aggressively Indian design—the elephant and humped bull—and bilingual type, they are of the Attic hemidrachm weight (*B.M. Cat.*, p. 34). They also differ from other issues of silver coin in being without monogram.⁷ These exceptional pieces soon made way for an abundant and attractive issue of square elephant and bull coins of the accepted hybrid drachm weight, and of square copper coins of Apolline types.

It is held that Heliocles was the successor of Eucratides in Bactria, and the last king to exercise authority on both sides of the Hindu Kush; in his reign Bactria was abandoned to the Scythians⁸ (*C.H.I.*

⁷ All other issues of silver coin are monogrammed, but it is possible for an isolated piece or two of these issues to be without monogram, e.g. two drachms of Menander in the B.M. I do not know of any tetradrachm without monogram.

⁸ The Sakas of Seistān who subsequently invaded India are conventionally known as the Indo-Scythians.

p. 461). He struck both kinds of money. His successors reigned only in India, and issued Indo-Bactrian money in silver and copper. The normal medium of silver currency was the drachm, the tetradrachm being rare.⁹ I know of two examples of coins of other than the tetradrachm and drachm weights, a hemidrachm of Apollodotus I (*B.M.Cat.*, p. 31), and a silver coin of Philoxenus weighing 216 grains (White King Sale Cat., Part I, No. 153). No Yavana gold coin has been discovered. It is plain that the Indian, accustomed to a silver piece weighing (those in actual circulation) about 48 grains, preferred a silver currency less massive than that of Athens. His new masters gave him a coin weighing approximately 38 grains, a standard based on considerations which can only be guessed at. Apollodotus I and Philoxenus made it of his favourite square shape. This concession to the Indian subject was attended by the continued issue of tetradrachms, though on the new hybrid scale, to suit the taste of the Greek. Large silver coins of a square shape were known neither to Greek nor to Indian, so the hybrid tetradrachms are always round. In Bactria the Greeks had coined sparingly in gold; in India they respected the custom which inhibited the striking of gold coin, and no Indo-Bactrian gold issue is known. The Greeks in India were a small minority, tetradrachms were not in great demand, so were seldom struck. Indian taste predominated in India proper, and those kings specially associated with the Punjab east of the Jhelum did not strike tetradrachms. The kings of the regions west of the Indus, where Greek

⁹ Hippostratus is an exception to the rule.

culture was comparatively strong, struck a larger proportion of tetradrachms than those reigning further east.¹⁰ This local influence manifests itself also in type, style, and the monograms.¹¹

The numbers of the Yavana invaders of India were not sufficient for the occupation of large tracts of country, and their power would have been dissipated in the plains. Probably the strength of the invading army was comparable with that of Alexander;¹² reinforcements were drawn from only one province of the Hellenic East, and ceased after the time of Heliocles, last king of Bactria, whose successors were completely cut off from the rest of Greek civilization

¹⁰ The tetradrachms of Menander, Hippostratus, Hermaeus are comparatively abundant. Apart from these the numbers of Indo-Bactrian tetradrachms in collections outside the British Museum, public or private, are: Berlin, 4; Paris, 3; Indian Museum, Calcutta (as catalogued), none; Lahore Museum, including the Bleazby Cabinet (as catalogued), 6; L. White King (Sale Catalogue), 10; J. P. Rawlins (Sale Catalogue), none. I have never found an Indo-Bactrian tetradrachm in the *bāzārs*, neither has Mr. W. S. Talbot, C.I.E., nor Mr. J. P. Rawlins; that is to say, they normally come from tribal and independent territory west of the Indus by the hands of persons who are in touch with the Rāwalpindi coin dealers.

There are some splendid Bactrian pieces at both Paris and Berlin. Such pieces do not come down to India now as apparently they used to do in Cunningham's time. Perhaps they go to Russia; there is a museum at Tashkent, in which "the traveller will find innumerable coins and some interesting works of Greek art illustrative of this period" (G. F. Wright, *Asiatic Russia*, i, p. 265, New York, 1902).

¹¹ The syncretism of the coins is purely Indo-Greek, and the hybrid kingdom is partly Hellenistic, partly Buddhist. The coins show no trace of Persian influence (M. J. Darmesteter, *Journal Asiatique*, 1887, p. 60).

¹² For estimates of this, see *C.H.I.*, pp. 350-1.

(*C.H.I.*, p. 458). Alexander's presence with his men was the equivalent of an army corps; his successors were mere mortals. It was as much as the Bactrian Greeks could do to follow Alexander's route, and to revive the towns founded by him.¹³ I believe that their dominions, the countries actually administered by them, were limited to the regions where their coins are regularly found, and these are:¹⁴

East of the Indus. The sub-montane tracts from the Beās (or even Rāvi) to the Indus; the hilly area contained between the Jhelum, the Indus, and the Salt Range; the Hazāra and Pūnch valleys.

West of the Indus. The vale of Peshāwar, the Kābul River basin, with extensions southwards to Quetta and Kandahār.

The coins grow more abundant as one travels north-west; they only occur sporadically in the eastern Punjab (regions between the Beās and Jumna rivers) as isolated specimens.¹⁵ I believe that the conquests

¹³ The early foreign invasions of N.W. India repeated themselves along quite definite lines, the trade routes (*C.H.I.*, p. 543). In the cases of Alexander, the Yavanas, the Indo-Scythians, and the Hūnas (Ephthalites), the invading impetus by way of the sub-montane Punjab failed on the banks of the Beās. The Kushāns by sheer weight of numbers passed on into the Jumna valley, where also the Indo-Parthian Gondopharnes had exercised real power.

¹⁴ I have only meagre information about the Indus valley or the vale of Kashmīr. The Kāngra valley, Srinagar and Multān have not got the reputation of being regular find-spots for Greek coins (*v. infra*). In respect of foreign invasions I believe that such ancient places as Multān, Shorkot (Jhang District), and the old sites in Sind have more to do with the Kushāns and the Ephthalites.

¹⁵ An opinion based on extensive local experience. In sixteen years I saw a solitary Indo-Bactrian piece from the west United Provinces, a square copper coin of Menander. The coins which

of Menander in the directions of the lower Indus and Ganges regions were raids.¹⁶ Doubtless the Greek traders travelled and trafficked far and wide in India, and carried the Greek money with them, but the homes of the Yavanas were not in the plains; they were in the pleasant sub-montane tracts and fertile hill valleys. Instead of Eucratides and his fellow-countrymen "being steadily driven south-eastwards

come to light sporadically in the East Punjab are usually one or two common types of Menander, Apollodotus II, Antimachus Nikephoros, and barbarous billon pieces of Strato. The big Sonepat hoard was a solitary find made fifty years ago (*B.M.Cat.*, p. xxxvi).

¹⁶ "The Bactrian kingdom extended southward till at the time of its greatest power it included a territory embracing Arachosia (Kandahār), and even Broach and Surat" (Dr. F. W. Thomas, "Sakastana", *J.R.A.S.*, 1906, p. 193). This is an extreme view, but it is significant that although the English were in Broach as early as A.D. 1616, it was not till the nineteenth century when the British had advanced to Muttra, five hundred miles nearer the seat of the Yavana power (Kābul and Gandhāra), that the coins of Menander and Apollodotus were for the first time revealed to the numismatic world (*Proceedings, R.A.S.*, 1825, pp. 313 f.; *P.M.Cat.*, p. 3). The well-known passage from the *Periplus* was translated by Bayer in his *Historiae Regni Graecorum Bactriani*: "Even to this day, ancient drachmae (of Apollodotus and Menander) make their appearance in Barugaza (Broach)." The Greek word is *προχρηροῦσι*, which means "crop up", "come to light". These coins probably made their way down to the west coast of India in the normal course of trade. Before the War, Indian rupees were accepted as currency in parts of the Levant, but it does not follow that the Levant was an appanage of the Indian empire. The topographical lists of the *Bṛihatsamhitā* place the Yavanas with the Pahlavas and Kāmbojas in the south-west division, Sind, and Kāthiāwār (Dr. J. F. Fleet, *Indian Antiquary*, 1893, p. 171). The astronomer Varāhamihira may have been thinking of a possible local settlement of Pahlavas (Indo-Parthians) in the Indus delta country, or of Yavanas in the vicinity of Nāsik, otherwise Dr. Fleet holds that all three peoples must be located far more to the north (*op. cit.*, p. 180). M. Senart allots the Kāmbojas to the Kābul river tract. See also *C.H.I.*, p. 514.

(by the pressure of the Indo-Scythians) into the plains of India" (*C.H.I.*, p. 38), I prefer to think of them as making room for the new arrivals, because the distribution of Indo-Bactrian and Indo-Scythian coins is almost identical east of the Indus and in the N.W. Frontier Province. There was probably plenty of room for both peoples. We know that the two dynasties overlapped (*C.H.I.*, pp. 571 f.), so there was no root-and-branch extirpation, no systematic devastation, nor hunting out of Greeks from their last strongholds. Such methods bide the coming of the Muhammadan Arabs. The Sakas appear to have been a tolerant people, ready to associate with the Yavanas, and to assimilate their ideas (as shown by the Saka coins). The influence of the weaker race, isolated and diluted by mixed marriages, rapidly declined, and the Yavana rule died a natural rather than a violent death.

The decline of the Indo-Bactrians is attended by a continuous deterioration of Greek art, as shown by the coins, and from this evidence alone a fairly satisfactory sequence of kings from Heliocles to Hermaeus can be constructed, with a period of maximum political power under Apollodotus and Menander. But this theoretical scheme, based only on art and the casual references of classical authorities, requires modification. We find that the best coins of Heliocles and Hermaeus, with certain intermediate kings, remain at a fairly stable level of excellence, which must be characteristic of the area of best art, the region with the closest Bactrian affinities, the upper Kābul valley. Hence the factor of locality has to be considered. Over-strikings furnish unexpected results. Eucratides over-struck a coin of Apollodotus, Heliocles a coin of Strato and

Agathocleia. We get an impression of the simultaneous rule of more than one king, of mutual antagonism, confusion, and civil war. The Yavanas seem to have been their own worst enemies. These inferences are embodied in the ingenious concept of the internecine struggles between the houses of Euthydemus and Eucratides (*C.H.I.*, pp. 544), the situation becoming further complicated by the advent of the Sakas. The petty Yavana rulers appear to have occupied positions comparable with those of the hill rajahs of to-day. The communications between these small kingdoms or city-states would be difficult, and constantly interrupted; in these water-tight compartments local influence would reign supreme. A union is reflected in the great influence of locality on the style and type of the coinage. The best example is furnished by the currencies of Zoilus, who has two issues of silver and copper coins, clearly distinguished in style, type, legend, and monogram; it is more reasonable to consider them as the issues of two distinct localities than to hold that there were two kings of the same name separated by a period long enough to produce so great a difference in style. There is no reason to believe that Zoilus held extensive territory, so these two localities could not have been far away from one another. A find of some two hundred drachms (*P.M.Cat.*, Pl. vii. 534) was brought to me at the Dehli Darbar Camp in December 1911, and said to have come from somewhere in the Sialkot District. Five years previously I had seen at Rawalpindi a small find of round copper Apollodotus II and Zoilus of types *P.M.Cat.*, Pl. v. 338, Pl. vii, 545, including a Zoilus re-struck on an Apollodotus II, and

two Dionysius of the former type, which the dealer said had come from Siālkot District. When stationed at Siālkot in the year 1908 I found in Siālkot City several square copper Apollodotus II of type *P.M.Cat.*, Pl. v. 344, with the monogram $\frac{\delta}{\kappa}$. These coins belong to what I term the eastern or Punjab class, the term Punjab being restricted to the region of Siālkot. The other issue of Zoilus is far superior—*P.M.Cat.*, Pl. vii. 524, *B.M.Cat.*, Pl. xii. 10—and bears monograms of Menander characteristic of the coins found in Hazāra and the Swāt valley. The copper type is the very rare coin, *B.M.Cat.*, Pl. xxxii. 2. I call this the intermediate or Gandhāra class. We know from Buddhist tradition that Sākala or Siālkot was the capital of Menander (*C.H.I.*, p. 549). But perhaps in addition to this winter capital, this "great centre of trade" (the Indians of the plains hate going to the hills), Menander had a spring capital at Taxila, and a summer headquarters in the Hazāra hills, or perhaps west of the Indus in Swāt or Kāpisa.¹⁷

These regional coinages seem to have been current only in their own locations, as it is unusual to find them outside their respective spheres of currency. Perhaps this explains the great rarity of the coins specially associated with the upper Kābul valley, such as the tetradrachms of Archebius, Strato, and Amyntas,

¹⁷ We know from Hiuen Tsiang that the Chinese hostages of Kanishka resided in the winter at Chīnabhukti, somewhere in the Punjab, perhaps near Amritsar; in the spring and autumn at Peshāwar in Gandhāra; in the summer at Kāpisa (Kāfiristān). They probably moved with the court. The present summer capital of Kashmīr is Srīnagar, and the winter capital is Jammū, only thirty miles away from Siālkot. The Political Agent has a cold-weather house at Siālkot.

because Kābul has remained isolated from the outer world since 1841. The only channel in India by which coins and other portable antiques from Central Asia, Afghānistān, and tribal territory can be obtained is the agency of the Rāwalpindi coin-dealers.¹⁸

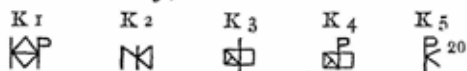
The coins as I see them fall into three main classes, those of superior, intermediate, and inferior style and workmanship, each with its own group of monograms. The classes are associated respectively with the western, middle, and eastern Yavana domains, or Kābul, Gandhāra, and the Punjab (Siālkot). All the money of Euthydemus I is of the beautiful Bactrian model, and the coins of Bactria are amongst the most noble examples of Greek art as applied to portraiture (*C.H.I.*, p. 545). The earliest settlements south of the Hindu Kush lay between the Khawak Pass and Kābul, and at or near Kābul (Ortospanum) itself, where it is certain that the Bactrian invaders would revive the towns founded by Alexander, Alexandria-under-the-

¹⁸ Who have been of great service to numismatics ever since the founder of the firm started sixty years ago as Sir Alexander Cunningham's collector. The forging habit is a set-off, but the dealers have always told me that the forgeries come from over the border. They know very well which are the genuine coins. There is no doubt that forgeries were current before this firm existed. I append the following quotation from p. 91 of Coly's *Journal of the Sutledge Campaign*:


"March 3rd, 1846. Men are going about with old coins to sell. They are of gold, silver, and brass, with Greek devices and inscriptions. Major Macdonald tells me that there are Jews in Cabul who are very clever in counterfeiting the ancient Greek and Bactrian coins which are found in these parts of the country, and that therefore there is some risk in buying what are carried about for sale." See also Cunn., *J.A.S.B.*, 1840.

It was a Kābuli Jew who had a didrachm of Telephus (*Num. Chron.*, 1872, p. 167), of which nothing more has been heard!

Caucasus, whence three roads to Bactria radiate (on the site probably of the present-day Chārikār, *C.H.I.*, p. 550), Kartana (modern Begrām according to Cunningham, where the American explorer Masson made his great numismatic discoveries a century ago), Kadrusi, and Nikaia, between Alexandria and the Kābul river (*C.H.I.*, p. 348, and Map 3). This neighbourhood (the upper Kābul valley, Alexander's satrapy of the Paropanisadae, with Alexandria-under-the-Caucasus for its capital, *C.H.I.*, p. 383) was the centre whence Bactrian culture radiated, and where it persisted in its purest form, as reflected in the currency, till the end of the dynasty. A similar view was expressed by Professor Gardner in describing the tetradrachms of the Tatta find (*v. infra*), most of which were of the Kābul class. "A remarkable feature of the whole find is the degree in which the coins of which it is composed seem to be contemporary. There is no marked difference in style and fabric between those of Diomedes and those of Hermaeus" (*Num. Chron.*, 1887). The Kābul coinage is distinguished by fine style and the comparative abundance of tetradrachms. The coin monograms which persist through a number of reigns cannot be interpreted as magistrates' names; they should rather be regarded as the names of mints.¹⁹ Monograms typical of this limited area in the upper Kābul valley, where Greek art retained such vitality, are



¹⁹ A view accepted by Dr. Macdonald (*C.H.I.*, p. 443).

²⁰ If I were treating of the kings before Heliocles, I could not omit .

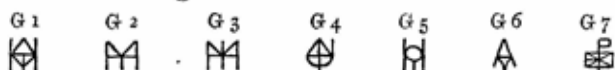
All five are found on the coins of Heliocles and Strato, the last four on those of Archebius. K 1 and K 3 are used by Hermaeus, and Hermaeus and Calliope; K 1 is the only monogram found on the coins of Strato and Agathocleia, with the exception of the copper coin re-struck by Heliocles, which has K 2. K 4 is confined to Heliocles, Archebius, Strato, and Peucolaus. Amyntas has K 2 and K 3. K 5 is found on the coins of fifteen kings ranging from Euthydemus I to Philoxenus, and commonly occurs on the square drachms of Apollodotus I. K 2 can represent Nicaea (Nikaia), K 3 Ophiane (Alexandria-under-the-Caucasus), K 4 Ortospanum, K 5 Kartana.²¹ I have not found the first four monograms on the coins of Menander.

The intermediate or Gandhāra class was struck in the middle land of the Yavana dominions, the region of Taxila and Pushkalāvati (Peucolaotis), of Rāwalpindi and Peshāwar, together with Hazāra, Pūnch, Kāpisa (Kāfiristān), and the Salt Range.²² This is the equivalent of the satrapy of Philip, the son of Machatas, together with the satrapy of Abhisāra (*C.H.I.*, p. 383). The Gandhāra class is typified by the coinage of Apollodotus I, Menander, Antialcidas, Lysias, Antimachus Nikephoros, Philoxenus, Diomedes, and a few ephemeral princes. Tetradrachms are fairly common of





²¹ In my opinion K 2 cannot represent the Nikaia of the Jhelum District (*C.H.I.*, p. 551), because coins of this style, and especially tetradrachms, are not found in Jhelum.

²² If Kāpisa be held to include the upper Kābul valley, with the subsidiary valleys of the Ghorband and Panjshir Rivers, and if Kāpisi (*v. infra*) is also in this region—Cunn., *Ancient Geography of India*, pp. 18, 19—then for Kāpisa in this context, read “east Kāfiristān”. For the situation and boundaries of Gandhāra, see Cunn., *op. cit.*, pp. 47, 48, and Prof. E. J. Rapson, *Ancient India*, pp. 81 f.

Menander and Philoxenus, extremely scarce of Antialcidas and Diomedes, unknown of Apollodotus I, Lysias, Antimachus Nikephoros. Monograms characteristic of this region are:









Monogram G 7 may represent a place either east or west of the Indus.

In the autumn of 1918 I saw a find of two hundred drachms of Menander in mint condition which had just come from Yaghistan (Swāt valley), and bore these monograms (except G 7, which is not a monogram of Menander). The first four occur on the abundant drachms of Antimachus Nikephoros, isolated specimens of which, together with an occasional drachm of Menander or of Apollodotus II, are found in the Punjab east of the Beās. They are just as widely distributed here as the drachms of Menander. I cannot think that the obscure Bactrian king Antimachus Theos exercised any influence in the extreme eastern Punjab, and feel that Antimachus Nikephoros was a different person. It is an argument against the locational significance of commonly recurring monograms that we cannot with certainty identify the names of Taxila, Peshāwar, Pushkalāvati, recurring as they ought to do in various reigns. G 6 is a possibility for Taxila.²³ It also occurs as  and ; cp.  on the coins of Telephus and Maues.  on the coins of Antialcidas, Lysias, and Strato may stand for Taxila;

²³ \mathfrak{N} is probably the letter T; it is written just in this manner in the word ΑΠΟΛΛΟΔΟΤΟΥ on a fine tetradrachm of Apollodotus II in the B.M.

Antialcidas is associated with Taxila in the Besnagar pillar epigraph. Despite the wide distribution of Menander's coins, his entire currency is very uniform in style, and the pieces which crop up in regions remote from Gandhāra and Siālkot (I have had a square copper coin from Cannanore, and a drachm of Menander has actually been dug up in Wales—*Indian Antiquary*, 1905, p. 252) bear just the usual monograms. It seems that these Greek conquerors of the East struck coin only in their settled districts, and did not advertise their more ephemeral conquests in this manner. Alexander's invasion of India was a unique opportunity for the issue of numismatic manifestoes, but none has yet appeared (except perhaps *B.M.Cat.*, *Arabia*, &c., Pl. xxii. 18); the Muhammadan conquerors behaved differently.

The eastern or Punjab class of coins is typified by the coins of Zoilus, Dionysius, Apollodotus II, Apollonphanes, and Strato II, with monograms , , , and Kharoshthī monograms. This region centred around Sākala (Siālkot), the Greek name of which appears to have been Euthymedia or Euthydemia (*C.H.I.*, p. 446), an area corresponding with Alexander's third Indian satrapy (*C.H.I.*, p. 383). Zoilus and Apollodotus II also struck in the middle region; the tetradrachms of the latter bear the monograms , , with Kharoshthī combinations. The former monogram occurs on the coins of Hippostratus. Menander's capital Euthydemia can be read in allied forms of  occurring on his drachms, which, however, are invariably of the Gandhāra style.

These random notes describe outstanding monograms which are probably those of mint towns. The kings

often overlap from one region to another. Sir Alexander Cunningham did this work in great detail (C.S.A.), but much new coin material has come to light since he wrote on Alexander's successors in the East. He did not strengthen his case by regarding each and every monogram as that of a mint town.

Early in the year 1917 I received a score of Indo-Greek tetradrachms from Rāwalpindi of such a character that it was clear they belonged to a new and important find. The wily owners sent me the worst specimens first; others came along in instalments, the last of which, comprising the rarest and finest pieces, did not materialise till two years after I had seen the first consignment. All that the dealers could say was that the coins came from the upper Kābul valley, and I do not suppose they knew more than this. I saw 97 specimens, distributed as follows: 10 Heliocles, 30 Archebius, 18 Strato, 5 Strato and Agathocleia, 2 Peucolaus, 2 Amyntas, 4 Diomedes, 13 Philoxenus, 1 Antialcidas, 10 Hermaeus, 2 Hermaeus and Calliope. The find is clearly of a rich and variegated character, and contains many coins of the highest degree of rarity. Tetradrachms of Peucolaus, and of Hermaeus and Calliope are new. Only one tetradrachm of Strato and Agathocleia, and two of Amyntas were previously known. The find is specially remarkable for the large number and variety of the tetradrachms of Archebius and of Strato. When I wrote my Punjab Museum Catalogue I knew of the existence of one tetradrachm (Indo-Bactrian kind) of Heliocles, and three tetradrachms of Archebius. This denomination in the case of Strato is very rare. The find contains two new types of Archebius, and no less than

four of Strato, each of the latter being represented by a single specimen. The coins are mostly of the best style, the Kābul class. There are thirteen monograms, and seventy coins bear one or other of the four monograms I especially associate with the Kābul region: sixteen KP , seventeen ϡ , twenty-six NK , and eleven ϡ . The other monograms are: K one Archebius; P one Philoxenus; K one Archebius; KN two Strato and one Antialcidas; Σ two Strato; Σ and ϡ ten Philoxenus; ϡ two Diomedes and four Hermaeus; Σ one Philoxenus; KP and Σ one Hermaeus; X one Philoxenus.

The absence of Menander is significant. The present hoard and that described by Professor Gardner (*Num. Chron.*, 1887) are the only hoards of Indo-Bactrian tetradrachms known to me. The latter came from Tatta, now in the Attock District, and attained such local fame that pre-Muhammadan silver coins of the larger sort are still called in Attock "Tatta rupees". The Tatta find comprised twenty or thirty tetradrachms of Strato, Strato and Agathocleia, Diomedes, Philoxenus, and Hermaeus, and presented the first examples of this denomination in the cases of Diomedes and of Strato and Agathocleia (a single specimen); also what were three new types of Strato and one of Philoxenus. All three tetradrachms illustrated by Professor E. J. Rapson in his paper "Coins of the Graeco-Indian Sovereigns Agathocleia, Strato I Soter, and Strato II Philopator" (*Corolla Numismatica*, Oxford, 1906), came from the Tatta find. I believe that the White King tetradrachms of Strato were also obtained from this *trouvaille* (White King Sale Cata-

logue, Amsterdam, 1905). I invite a reference to the plate illustrating Professor Gardner's paper of 1887, and a comparison with the present specimens. The two finds are closely related, the second being an amplified version of the first. During the thirty years that elapsed between the two discoveries no specimens of the rarer coins came to light. Their great scarcity may be due to the fact that they were actually struck in small numbers; some of the Strato tetradrachms seem to be from the same dies. On the other hand, this attribute of extreme rarity might disappear if Afghānistān becomes more accessible.

The specimens described below include coins from various sources. A few have been published previously.


1. SOPHYTES.

<i>Obv.</i>	<i>Rev.</i>
Helmeted head of Athena to r. No legend.	Cock, caduceus, and $\Sigma\Omega\Phi\Upsilon$ $\Upsilon\Omega\Upsilon$ as on the drachm (<i>B.M. Cat.</i> , Pl. i. 3).
A. Wt. 18.	(Pl. XIV. 1.) Berlin.

This unique "tri-hemiobol in the Berlin Museum" (*C.H.I.*, p. 388) was published in *Erwerbungen des Königl. Münzcabincts in den Jahren 1898-1900 in Zeitschrift für Numismatik*, Berlin, 1904.

2. DEMETRIUS.

<i>Obv.</i>	<i>Rev.</i>
Draped bust of king to r., diademed, and wearing flat <i>kausia</i> .	Zeus standing facing; thunderbolt in r. hand; long sceptre in l.
Above ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ	Kh. legend:—
Below ΔΗΜΗΤΡΙΟΥ	Above <i>Maharajasa apara-jitasa</i> ; Below <i>Demetriyasa</i> .

In r. field 

A. Wt. 145. (Pl. XIV. 2.) B.M. 1.

This important new coin is not from the Kābul find. It is the first specimen of a Demetrius silver bilingual currency to be discovered, a companion to the two or three square copper coins (*B.M.Cat.*, Pl. xxx. 3). The epithet (with its Kharoshthī translation) and the monogram are the same. On the other hand, the king wears the flat *kausia*, a novelty in the case of Demetrius, and not seen before on an Indo-Bactrian tetradrachm. The diadem ends are arranged as on the coins attributed by Dr. Macdonald to a proposed Demetrius II (*C.H.I.*, p. 448). The reverse design agrees with that of the silver coins of Heliocles.

3. PANTALEON. A drachm of Pantaleon of the type illustrated in *B.M.Cat.*, Pl. xxx. 4. I only know of one specimen each of the tetradrachm, drachm, and obol (Rapson, *Num. Chron.*, 1904, p. 321, Pl. xvii. 22), all now in the British Museum. The monogram is the same in each case. Not from the Kābul find.

Obv.

Bust of the king r., diademed.

Rev.

ΒΑΣΙΛΕΩΣ ΠΑΝΤΑ-
ΛΕΟΝΤΟΣ


Zeus seated l. on throne; in
l. hand long sceptre; on
r. hand figure of the three-
headed Hecate.


AR. Wt. 60. (Pl. XIV. 3.) B.M. 1.

4. EUCRATIDES. The only stater of Eucratides known to me was once in the Montagu Collection (*Montagu Sale Catalogue*, Part II, 774, also *Num. Chron.*, 1892, p. 37, and Pl. iii. 11), and is now in Mr. E. T. Newell's splendid Cabinet.

AR. (Pl. XIV. 4.) E. T. Newell.


5. EUCRATIDES. This important square copper coin of Eucratides, Pl. XIV. 5, a specimen of which is

re-struck on a coin of Apollodotus I, has been fully described by Professor E. J. Rapson at pp. 783 f. of *J.R.A.S.*, 1905. It not only furnishes indisputable testimony to the fact that Kāpisi, capital of the great Kāpisa-Gandhāra kingdom, formed part of the Indian dominions of Eucratides, but gives us a portrait of the enthroned Zeus as the tutelary elephant-deity of Kāpisi city (*C.H.I.*, p. 556), accompanied by two symbols, a mountain, and the forepart of an elephant in attitude of obeisance. Professor Rapson in that paper noted that neither the monogram  of the coin of Apollodotus re-struck by Eucratides, nor the complicated monogram of the new coin could be resolved into any possible Greek equivalent of the name Kāpisi. He has now authorized me to say that the Eucratides monogram may possibly give Pilusāra, the name of the mountain which Hiuen Tsiang tells us was south-west of the capital, and took its name from its presiding genius who had the form of an elephant. Both mountain and elephant are on the coin. The enthroned god is either making a gesture of command or benediction with his right hand, the attitude of the fingers and thumb being much exaggerated in comparison with the scale of the rest of the figure, or he is holding an object in his hand, perhaps something connected with the elephant-cult, or an amulet or symbol in the shape of a crescent or of horns. In the latter case, we again see the same object on some silver coins of later kings, e. g. Hermaeus, Maues, Azilises (e. g. *B.M.Cat.*, Pl. xx. 4), and Azes (Pl. XVII. 12).

Another coin showing the enthroned god and the mountain is a copper piece of Telephus—*P.M.Cat.*, Pl. viii. 640. The monogram  is peculiar to the

coins of Telephus of the type just mentioned and the silver type (*P.M.Cat.*, Pl. ix, x), and to those of Maues exemplified at *P.M.Cat.*, Pl. x. 20 and Pl. xv. i. The latter type, the silver "biga" coin, also shows the enthroned god. The monogram may possibly indicate Kāpisi. The letters K and A appear with certainty on a square copper coin of Apollodotus—*P.M.Cat.*, Pl. iv. 307—of the same type as that re-struck by Eucratides.


6. MENANDER.²¹



<i>Obv.</i>	<i>Rev.</i>
Helmeted and diademed bust of king to r.	Winged Nike with palm and wreath to r.
Above ΒΑΣΙΛΕΩΣ ΔΙ-ΚΑΙΟΥ	Kh. legend:—
Below ΜΕΝΑΝΔΡΟΥ	Above <i>Maharajasa dhramika</i> .
	Below <i>Menadrassa</i> .
	To l. 
Æ. Wt. 35.	B.M.



No. 6.

7.

<i>Obv.</i>	<i>Rev.</i>
Legends as on No. 6.	Panther to r.
Helmeted warrior (the king?) in tunic, cloak, and long boots standing r.; spear in l. hand and shield on l. arm. Short sword projecting from l. thigh. R. arm extended in a gesture of command.	
To l. 	Æ. Sq. (Pl. XIV. 8.)
	B.M.

²¹ The reverse, as shown on Pl. XIV. 8, belongs to a normal-type drachm of Menander with monogram  in the form . The coin is reproduced correctly in the block.

There are just a few coins of Menander in silver and copper on which the epithet $\Sigma\Omega\Theta\text{P}$ is replaced by $\Delta\text{I}\text{K}\text{A}\text{I}\text{O}\Sigma$ (*P.M.Cat.*, p. 59). $\Delta\text{I}\text{K}\text{A}\text{I}\text{O}\Upsilon$ is translated *dhramikasa*, and *dharmā* in a technical sense is the Buddhist Law. Tradition tells us that Menander became a Buddhist—*C. H. I.*, pp. 549, 550; H. G. Rawlinson, *Indian Historical Studies*, London, 1913, p. 50—and these coins may testify to his conversion. If this is the case, it took place late in life as shown by the portrait on the silver pieces. The monogram on the above drachm contains all the letters of Euthydemia or Euthymedia, Menander's capital in the sub-montane Punjab; it also appears to be the monogram on the unique small square copper coin (*B.M.Cat.*, Pl. xii. 7) and on the coin *P.M.Cat.*, Pl. vi. 481. The copper piece is of a hybrid type because, though the regal epithet is still $\Sigma\Omega\Theta\text{P}$, the reverse design is a Buddhist emblem, the *dharmachakra*, the wheel of the Law.

The drachms of Menander are very many times more abundant than the copper coins.

8. APOLLODOTUS. A tetradrachm of Apollodotus of type *B.M.Cat.*, Pl. x. 1, but different in style. There is a Kharoshthī monogram in addition to the Greek. Not from the Kābul find.

A. Wt. 142. (Pl. XIV. 7.) B.M. 1.

9. HELIOCLES. This fine tetradrachm of Heliocles of the helmeted sort is a new type for this king. The legends are the same as those on coin *B.M.Cat.*, Pl. vii. 5, the only known Indo-Bactrian tetradrachm of Heliocles till the discovery of this find. The find

contained five specimens of the diademed bust type, with monograms K 1, K 2, and K 3. Monogram K 4.

AR. Wt. 148. (Pl. XIV. 9.) B.M. 1.

10. A tetradrachm bearing the helmeted bust of the king thrusting a javelin is new (type formerly known of the drachm size only). The crested helmet is ornamented with the horn and ear of a bull, as on the coins of Eucratides, whereas the helmet of No. 9 bears the head and wing of Medusa. The right shoulder is bare and the left is covered by the aegis. In other respects the design follows that of the splendid Attic tetradrachm of Eucratides, *C.H.I.*, Pl. iv. 6. Mon. K 3.

AR. Wt. 138. (Pl. XIV. 10.) B.M. 1.

ARCHEBIUS. The obverse design of the fine tetradrachm of Archebius—*C.H.I.*, Pl. xxx. 83 d; *B.M.Cat.*, Pl. ix. 4—closely resembles No. 10 and has the same monogram. The Kābul find contained three tetradrachms with the normal Archebius legend but of a new type, and luckily all three were different. They bear the same monogram K 4. The figure of Zeus instead of bearing a long sceptre in the left hand across his body, is carrying the aegis on his extended left arm.

11.

<i>Obv.</i>	<i>Rev.</i>
ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ	Kh. legend <i>Maharajasa dhra-</i>
ΝΙΚΗΦΟΡΟΥ ΑΡΧΕ-	<i>mikasa jayadharasa Arkhe-</i>
ΒΙΟΥ	<i>biyasa.</i>
Helmeted bust (Medusa	Zeus facing with aegis on l.
helmet) of king to r.	arm; brandishes thunder-
	bolt in r. hand.

AR. Wt. 148. (Pl. XIV. 11.) B.M. 1.

12. The king wears the smooth helmet (bull's ear and horn).

Æ. Wt. 149. (Pl. XIV. 12.) B.M. 1.

13. The king is diademed only.

Æ. Wt. 144.5. B.M. 1.

14. A tetradrachm of the normal Archebius type, Medusa helmet, but with two monograms, K 3 to l., and K 4 to r.

Æ. Wt. 146. B.M. 1.

15. As No. 14, but diademed only.

Æ. Wt. 148. (Pl. XIV. 13.) B.M. 1.

16. A tetradrachm of the normal Archebius type, smooth helmet, but with KAI between ΔΙΚΑΙΟΥ and ΝΙΚΗΦΟΡΟΥ; mon. K 2. A new variety.

Æ. Wt. 147. (Pl. XIV. 14.) B.M. 1.

17. A fine broad specimen of the normal type, diademed head, mon. K 2. A piece of this type and mon. K 2 is at Berlin (Guthrie Collection).

Æ. (Pl. XV. 1.) B.M. 1.

18. A tetradrachm of type *B.M.Cat.*, Pl. ix. 4, but the Medusa instead of smooth helmet. It is interesting to note that the die-sinker had engraved mon. K 3 in the l. lower field of the reverse, but erased it and introduced mon. K 4 to the r.

Æ. Wt. 148. (Pl. XV. 2.) B.M. 1.

19. PEUCOLAUS.

Obv.

Diademed bust of king to r.

Gr. legend:—

ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ
ΚΑΙ ΣΩΤΗΡΟΣ ΠΕΥ-
ΚΟΛΑΟΥ

Rev.

Zeus standing to l., long
sceptre in l. hand held
across body. R. arm ex-
tended and r. hand holding
small two-horned object of
an indefinite shape.

Kh. legend:—

*Maharajasa dhramikasa tra-
tarasa Peukalaäsa.*

To r. mon. K 4.

To l. mon. K 3.

R. Wt. 147. (Pl. XV. 4.) B.M. 1.

20.

Obv.

Artemis with arrow and
quiver.

On three sides, Gr. legend
as on No. 19.

Rev.

City goddess with turreted
crown to l.; lotus in r.
hand.

On three sides Kh. legend as
on No. 19.

To l. mon. K 4.

Æ. Sq. (Pl. XV. 3.) B.M.


Two specimens of this important tetradrachm came from the Kābul find; the second is in the Lahore Museum. The discovery of a tetradrachm of the obscure king Peucolaus showing us for the first time his portrait, is an unexpected pleasure. He has been known till now from two or three square copper coins like No. 20. The first of the latter came into the hands of Sir Alexander Cunningham, who communicated the discovery of this new king to Mr. C. J. Rodgers by letter dated 13th September, 1884 (*Num. Chron.*, 1896). The copper coin was published by Mr. Vincent Smith in *Numismatic Notes and Novelties*, *J.A.S.B.*, 1898, as one of three known

specimens. He placed Peucolaus late in the dynasty with Hippostratus. The tetradrachm shows that Peucolaus was a king of the upper Kābul valley, closely allied to Archebius. The figure of Zeus is in a new posture for Indo-Bactrian coins, though found in this position on a few rare tetradrachms of the Indo-Scythian Azes (*P.M.Cat.*, Pl. xi. 36). The right hand may with outstretched finger and thumb be making a gesture of benediction or command. But I appear to see in the hand a small object in the shape of horns or a crescent as on the Kāpisi coin No. 5. In this case a lotus would be appropriate, but it is not a lotus.²⁵ "Zeus", standing or enthroned, as portrayed on some tetradrachms of Hermaeus, Maues, Azilises, Azes, is clearly holding some such object in the outstretched right hand.


Portraits of the following Indo-Bactrian kings are still lacking: Apollodotus I (assuming that the conventional allocation of coins to the first and second kings of this name is correct, *B.M.Cat.*, pp. 34 to 39), Antimachus Nikephoros, Telephus.

21. ANTIALCIDAS.

The obverse of this tetradrachm is of the normal diademed head type, and both legends are as usual. On the reverse an elephant with its trunk at the salute, Nike on its head, and a bell round its neck, walks to the left. By its side, portrayed on a heroic scale,

²⁵ Peucolaotis is the Greek form of Pushkalāvati (Chārsadda), the ancient capital of western Gandhāra, a word meaning "(city) of lotuses". Neither of the two known monograms of Peucolaus seems to represent Peucolaotis. All the letters of the latter name are contained in , a monogram of Amyntas and Hermaeus.

stalks "Zeus". Apparently this quaint design shows the elephant-deity and his elephant indulging in a victorious march-past.

<i>Obv.</i>	<i>Rev.</i>
ΒΑΣΙΛΕΩΣ ΝΙΚΗΦΟ- ΡΟΥ ΑΝΤΙΑΛΚΙΔΟΥ	Kh. legend <i>Maharajasa jaya-</i> <i>dharasa Antialikidasa.</i>
Diademed bust of king to r.	Elephant, bell on neck, walk- ing l. with trunk at the salute, and Nike on head. In foreground is Zeus to l. front. To l. mon. 

R. Wt. 146.5. (Pl. XV. 5.) B.M. (Cunn.).

Only three or four of these tetradrachms are known; they are much forged. There was one in the find, but I illustrate the Cunningham specimen.

22. As No. 21 with same monogram, but diademed bust to l., thrusting javelin. This tetradrachm is in very poor condition, but shows that Antialcidas struck the "javelin-thruster" type. Not from the Kābul find. B.M. 1.

23. The reverse design of three or four drachms of Antialcidas represents Zeus holding the wreath and palm of Nike in his right hand instead of Nike herself upon it. This is an unpublished Cunningham coin. Mon. G 1.

R. Wt. 37.5. (Pl. XV. 6.) B.M.

24. LYSIAS.

This is an unpublished Cunningham drachm of Lysias of the "helmeted javelin-thruster" type; it is a beautiful and unique specimen. The Medusa head forming part of the aegis, as worn on the left shoulder by other javelin-throwing kings, is replaced by a tiny

elephant. Apparently Lysias considered himself under the protection of the elephant-deity.

R. Wt. 37. (Pl. XV. 7.)

B.M.

25. STRATO.

Obv.

Diademed bust of king to r.
Gr. legend:—

ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ
ΚΑΙ ΔΙΚΑΙΟΥ ΣΤΡΑ-
ΤΩΝΟΣ

Rev.

Athena standing to l., with
helmet, shield, and spear,
carrying Nike on her out-
stretched r. hand.

Kh. legend:—

*Maharajasatratatarasadrhami-
kasa Stratasa.*

To l. mon. K 3.

R. Wt. 141. (Pl. XV. 8.)

B.M. 1.

This new and unique coin shows the Victory-bearing Athena, a concept of the deity not seen before on any coin of the Bactrian or Indo-Bactrian series.

26. The obverse of this coin is the same as No. 25 but different in style; the reverse legend is that of No. 25, but there is the normal reverse design of Athena Promachos to l., and in l. lower field mon. K 1.

R. (Pl. XV. 9.)

B.M. 1.

27. As No. 26, but the bust of the king is helmeted, mon. K 4. There was one poor specimen of this type in the find. It was better represented in the Tatta find—E. J. Rapson, *Corolla Numismatica*, Oxford, 1906, Pl. xii. 7; *White King Sale Catalogue*, Amsterdam, 1905, Part I, 107; *Num. Chron.*, 1887, Pl. vii. 6. There is a fine specimen in the Bibliothèque Nationale, Paris.

B.M.

28. As No. 26, but the bust of the king is helmeted, and Athena Promachos is facing—*White King Sale*

Catalogue, Part I, 106. This coin probably came from the Tatta find.

29. As No. 26, but diademed bust of king to l., thrusting a javelin. The reverse resembles that of No. 26, mon. K 4. This coin is unfortunately in poor condition, but is a new type. B.M. 1.

30. With diademed bust as No. 26, but the Greek legend is ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΔΙΚΑΙΟΥ ΣΤΡΑΤΩΝΟΣ. The reverse has the usual design of Athena Promachos to l., with mon. K 1 in lower l. field. Drachm size known (in B.M.).

Æ. Wt. 148. (Pl. XV. 11.) B.M. 1.

31. This coin resembles No. 30, but Athena is to right; a variety known previously only in the drachm size.

Æ. (broken). (Pl. XV. 10.) B.M. 1.

32. Also like No. 30, but Athena to front—*White King Sale Catalogue*, Part I, 104—probably from the Tatta find, also *Num. Chron.*, 1887, Pl. vii. 4. Much forged. The drachm size is known (in B.M.). B.M.

33. As No. 30, but the king is bearded—E. J. Rapson, *Corolla Numismatica*, Pl. xii. 9, and *Num. Chron.*, 1887, Pl. vii. 5; from the Tatta find. B.M.

34. The king is bearded (as No. 33), but Athena is to front.

Æ. Wt. 144.5. (Pl. XV. 12.) B.M. 1.

Coins Nos. 33 and 34 provide the only instances of a bearded king in the entire Bactrian and Indo-Bactrian series.

The coins of the Seleukid king Demetrius II bear his portrait without beard (first reign), and with beard


(second reign),²⁶ his two reigns being separated by a period of captivity with the Parthians (*Historia Numorum*, B. V. Head, pp. 766, 768). The Parthian kings are bearded.

35. With Greek legend as No. 30, but helmeted bust of king (Medusa helmet) to l., thrusting javelin. Reverse as No. 30; in lower l. field, mon. Σ. A new type.

AR. Wt. 136. (Pl. XV. 13.) B.M. 1.

36. A drachm of type No. 30, with mon. ΚΙ. Not from Kābul find.

AR. (Pl. XVI. 1.) B.M. 1.

37. The Greek legend on this tetradrachm is ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ, and the bust of the king with diademed head is thrusting javelin to l. On the reverse is the corresponding Kh. inscription; Athena Promachos is to l.; the mon. is . A new type.

AR (broken). (Pl. XV. 14.) B.M. 1.

Issues with this legend are known (in B.M.) with helmeted and with diademed head, Athena to l. in each case, in drachm size only. There is also a variety which contains the additional word *dhramikasa* in the Kh. inscription, known only in the drachm size, with helmeted head—B.M., also *P.M.Cat.*, Pl. v. 359—and diademed head, Athena to l.

38. I illustrate the last-named coin, which was in my collection. Not from the Kābul find.

(Pl. XVI. 3.) B.M. 1.

²⁶ As pointed out to me by Mr. E. S. G. Robinson of the British Museum.

39. Gr. legend ΒΑΣΙΛΕΩΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ surrounding helmeted bust (smooth helmet) to r. The Kh. inscription is *Maharajasa pracaçhasa tratarasa Stratasa*; Athena Promachos is to l.; and the mon. is K 3.

A. Wt. 148. (Pl. XVI. 4.) B.M. 1.

Some half-dozen specimens of this issue were in the find, with mons. K 3 and K 2; unknown in the drachm size.

40. As No. 39, but head diademed only; mon. K 2.

A. Wt. 141. (Pl. XVI. 2.) B.M. 1.

The drachm of this type is the only abundant silver coin of Strato. All the others are very rare, and where both tetradrachm and drachm sizes are known, the drachm is as scarce as the tetradrachm. Coins 25, 26, 29, 31, 33, 34, 35, 36, 37, 38 are single specimens. I have described all known types of silver coin, and have arranged them in what appears to be their chronological order. The unique specimen described at No. 25 appears to be Strato's earliest coin; the portrait is that of a boy. Strato evidently had a long and varied career. The monograms on his copper coins connect him also with Gandhāra.

I have omitted to describe the barbarous coins of drachm size in base silver and billon often found in the eastern Punjab. I myself have picked these up in Kapurthala, Rūpar (Ambāla District), and Ambāla City. Cunningham at first attributed these rude coins, not to Strato himself, but to the Indian princes who succeeded to his power (*Coins of Indian Buddhist Satraps*). Professor Rapson holds that they were struck by Strato himself in the eastern Punjab towards the end of his long reign (*C.H.I.*, p. 553).

41. STRATO AND AGATHOCLEIA. Gr. legend ΒΑΣΙΛΕΩΣ
ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ ΚΑΙ ΑΓΑΘΟΚΛΕΙΑΣ;
conjugate diademed busts of Strato and of Agathocleia
to r. The reverse is that of No. 30; mon. K I.

R. Wt. 143. (Pl. XVI. 5.) B.M. 1.

42.

<i>Obv.</i>	<i>Rev.</i>
Bust of queen r. Gr. legend:— ΒΑΣΙΛΙΣΣΗΣ ΘΕΩΤΡΟ- ΠΟΥ ΑΓΑΘΟΚΛΕΙΑΣ	Diademed warrior, with shield and spear, walking r. Kh. legend as on No. 41. To r. mon. K I.

R. Wt. 84. (Pl. XVI. 6.) B.M.

Professor Rapson holds that Agathocleia was the mother of Strato (*C.H.I.*, p. 552). There were five tetradrachms in the find, known previously from a single specimen, *Num. Chron.*, 1887, Pl. vii. 7 (much forged). The drachm was published by Professor Rapson in *Corolla Numismatica*, Oxford, 1906. There is a very poor duplicate of it in the Indian Museum, Calcutta (*I.M.Cat.*, Pl. iv. 11).

43. AMYNTAS.

The tetradrachm of Amyntas—*B.M.Cat.*, Pl. xiv. 9—differs from the drachms in its reverse design, a feature which is most unusual in this series. It remained unique for many years till the White King specimen came to light—*W. K. Sale Cat.*, Part I, 168, and has been much forged. There were two tetradrachms in the find, one a duplicate of the B.M. specimen. Its reverse in style and treatment closely resembles coins Nos. 39 and 40.

R. Wt. 151.6. (Pl. XVI. 9.) B.M. 1.

39. Gr. legend ΒΑΣΙΛΕΩΣ ΕΠΙΦΑΝΟΥΣ ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ surrounding helmeted bust (smooth helmet) to r. The Kh. inscription is *Maharajasa praçāḥasa tratarasa Stratasa*; Athena Promachos is to l.; and the mon. is K 3.

A. Wt. 148. (Pl. XVI. 4.) B.M. 1.

Some half-dozen specimens of this issue were in the find, with mons. K 3 and K 2; unknown in the drachm size.

40. As No. 39, but head diademed only; mon. K 2.

A. Wt. 141. (Pl. XVI. 2.) B.M. 1.

The drachm of this type is the only abundant silver coin of Strato. All the others are very rare, and where both tetradrachm and drachm sizes are known, the drachm is as scarce as the tetradrachm. Coins 25, 26, 29, 31, 33, 34, 35, 36, 37, 38 are single specimens. I have described all known types of silver coin, and have arranged them in what appears to be their chronological order. The unique specimen described at No. 25 appears to be Strato's earliest coin; the portrait is that of a boy. Strato evidently had a long and varied career. The monograms on his copper coins connect him also with Gandhāra.

I have omitted to describe the barbarous coins of drachm size in base silver and billon often found in the eastern Punjab. I myself have picked these up in Kapurthala, Rūpar (Ambāla District), and Ambāla City. Cunningham at first attributed these rude coins, not to Strato himself, but to the Indian princes who succeeded to his power (*Coins of Indian Buddhist Satraps*). Professor Rapson holds that they were struck by Strato himself in the eastern Punjab towards the end of his long reign (*C.H.I.*, p. 553).

41. STRATO AND AGATHOCLEIA. Gr. legend ΒΑΣΙΛΕΩΣ
ΣΩΤΗΡΟΣ ΣΤΡΑΤΩΝΟΣ ΚΑΙ ΑΓΑΘΟΚΛΕΙΑΣ;
conjugate diademed busts of Strato and of Agathocleia
to r. The reverse is that of No. 30; mon. K 1.

R. Wt. 143. (Pl. XVI. 5.) B.M. 1.

42.

<i>Obv.</i>	<i>Rev.</i>
Bust of queen r. Gr. legend:— ΒΑΣΙΛΙΣΣΗΣ ΘΕΩΤΡΟ- ΠΟΥ ΑΓΑΘΟΚΛΕΙΑΣ	Diademed warrior, with shield and spear, walking r. Kh. legend as on No. 41. To r. mon. K 1.

R. Wt. 84. (Pl. XVI. 6.) B.M.

Professor Rapson holds that Agathocleia was the mother of Strato (*C.H.I.*, p. 552). There were five tetradrachms in the find, known previously from a single specimen, *Num. Chron.*, 1887, Pl. vii. 7 (much forged). The drachm was published by Professor Rapson in *Corolla Numismatica*, Oxford, 1906. There is a very poor duplicate of it in the Indian Museum, Calcutta (*I.M.Cat.*, Pl. iv. 11).

43. AMYNTAS.


The tetradrachm of Amyntas—*B.M.Cat.*, Pl. xiv. 9—differs from the drachms in its reverse design, a feature which is most unusual in this series. It remained unique for many years till the White King specimen came to light—*W. K. Sale Cat.*, Part I, 168, and has been much forged. There were two tetradrachms in the find, one a duplicate of the B.M. specimen. Its reverse in style and treatment closely resembles coins Nos. 39 and 40.

R. Wt. 151.6. (Pl. XVI. 9.) B.M. 1.

44. This is the first known tetradrachm of the drachm type; the king is helmeted (Medusa helmet) and thrusting javelin to l. The enthroned Zeus carries a palm as well as a long sceptre in his l. hand. This coin provides us with the new fact that Zeus is carrying Athena on his r. hand, and not Nike. A close inspection will show that this is also the case with the drachms, though the tiny and badly portrayed deity has always been assumed to be Nike, as on the coins of other kings.

<i>Obv.</i>	<i>Rev.</i>
ΒΑΣΙΛΕΩΣ ΝΙΚΑΤΟ- ΡΟΣ ΑΜΥΝΤΟΥ	Kh. legend <i>Maharajasa jaya-</i> <i>dharasa Amitasa.</i>
Helmeted bust of king to l., thrusting javelin.	Zeus enthroned; sceptre and palm in l. hand; figure of Athena on r. hand.

Æ. Wt. 148.5. (Pl. XV. 7.) B.M. 1.

45. A drachm of the type of No. 44; not from the Kābul find. Amyntas's portentous nose is much emphasized. Archebius and Peucolaus also had remarkable noses. The monograms on the drachms connect Amyntas with Hermaeus, and show that he struck in Gandhāra as well as Kābul. This mon., , may represent Peucolaotis (*v. supra*).

Æ. Wt. 36. (Pl. XVI. 8.) B.M. 1.

46. DIOMEDES.

The find contained four tetradrachms of Diomedes of three types, one with helmeted head (smooth helmet), the first to be discovered. It was a broken specimen, but I also had another, not from the find. The drachms of Diomedes show the Dioskouroi both mounted and dismounted. The known tetradrachms are all of the first style.

B.M. 1.

47. A tetradrachm of the helmeted (smooth helmet) javelin-thruster type; this can be compared with the Tatta specimen—*Num. Chron.*, 1887, Pl. vii. 3—which has been much forged.

(Pl. XVI. 10.)

B.M. 1.

48. A tetradrachm of the diademed head type. The Tatta specimen has been much forged. On this coin the name of the king in the Kh. legend is written *Diyamedasa*; on No. 47, *Diyametasa*.

(Pl. XVI. 11.)

B.M. 1.


49. PHILOXENUS.

The tetradrachms of Philoxenus in the find were of all three known types. I illustrate the javelin-thruster type (Medusa helmet)—cf. *Num. Chron.*, 1887, Pl. vii. 8. A fine specimen of this coin is at Berlin.

R. Wt. 145.5. (Pl. XVI. 12.)

B.M. 1.

50. ZOILUS.

<i>Obv.</i>	<i>Rev.</i>
Elephant walking r., with fragmentary Kh. legend:— - - - (<i>Jho</i>)ila - - -	In bead-and-reel border, male figure standing r. To l.  ; to r. Kh. mon. No legend.

Æ. Rectangular (broken). Wt. 27.

B.M.

51.

<i>Obv.</i>	<i>Rev.</i>
In bead-and-reel border, elephant walking r. No legend.	Standing male figure. Kh. legend:— - - - <i>Jhoilasa</i> - - -

Æ. Round. Wt. 38. W. S. Talbot.

These are two unpublished coins of Zoilus of Punjab types allied to that of coin *P.M.Cat.*, Pl. vii. 546.

52. NICIAS.

Obv.

Helmeted bust (smooth helmet) to r.

Gr. legend:—

ΒΑΣΙΛΕΩΣ ΣΩΤΗΡΟΣ
ΝΙΚΙΟΥ

Rev.

Warrior king (?) wearing tunic, cloak, and short sword; palm in l. hand. Small object resembling a crescent or pair of horns in r. hand (or possibly exaggerated finger and thumb).

Kh. legend:—

Maharajasa tratarasa Nikiüsa.

Mon.  to r.

R. Wt. 36. (Pl. XVI. 13.) B.M. 1.


53.

Obv.

Head of Poseidon to r. with trident on shoulder. On three sides, Gr. legend as on No. 52.


Rev.

Dolphin twined round anchor.

To l. mon. 

On three sides, Kh. legend as on No. 52.

Æ. Square. (Pl. XVI. 14.) M. Longworth Dames.

A drachm of Nicias of helmeted type is new. He has one or two of the Gandhāra monograms commonly found on the coins of Menander, and the mon.  connects him also with Philoxenus, Theophilus and Diomedes.

The square copper coin provides the first known instance in this series of the occurrence of the head of Poseidon as an obverse design; the attribution is certain because of the trident on the shoulder. The only other known specimen—*B.M.Cat.*, Pl. xiii. 12—is too poor to show either trident or monogram. The type is thoroughly marine. The statement that the coins of Nicias are found only in the Jhelum District (*C.H.I.*, p. 547) was originally due to Mr. J. P. Rawlins in the *Jhelum District Gazetteer*. Both the coins described above came from the west of the Indus.

54. THEOPHILUS.

<i>Obv.</i>	<i>Rev.</i>
Head of Herakles r., wearing lion's skin. On three sides	Club of Herakles upright.
Gk. legend:—	Kh. legend:—
ΒΑΣΙΛΕΩΣ ΔΙΚΑΙΟΥ	Maharajasa dhramikasa
ΘΕΟΦΙΛΟΥ	Theophilasa.
	In r. middle field □
Æ. Square. (Pl. XVII. 1.) W. S. Talbot.	

The coins of Theophilus are extremely scarce. The Cunningham drachm in the B.M.—*P.M.Cat.*, Pl. ix. viii—is still unique. I think the specimen in the Indian Museum, Calcutta—*I.M.Cat.*, Pl. vi. 8—is a cast of the Cunningham coin. There are two types of square copper coin, of which the one now described is represented by *P.M.Cat.*, Pl. viii. 634, and the above specimen; the latter was found by Mr. Rawlins in Talagang, Attock (formerly Jhelum) District.

55. ARTEMIDORUS.

This coin is a tetradrachm of type *P.M.Cat.*, Pl. vii. 553, and is a new discovery. Not from the Kābul find.

<i>Obv.</i>	<i>Rev.</i>
ΒΑΣΙΛΕΩΣ ΑΝΙΚΗΤΟΥ	Kh. legend <i>Maharajasa apaḍi-</i>
ΑΡΤΕΜΙΔΩΡΟΥ	<i>hatasa Atrimitorasa.</i>
Diademed bust of king to r.	Winged Nike to r., with wreath and palm. Mon. to l. (<i>P.M.Cat.</i> , p. 218, 75).
Æ. Wt. 139. (Pl. XVII. 2.)	B.M. 1.

56.

<i>Obv.</i>	<i>Rev.</i>
Male figure to front; bilingual legends as on other coins of Artemidorus.	Panther to l.
	Mon. ♂
Æ. Square. (Pl. XVII. 3.)	B.M.

It is noteworthy that Artemidorus repeats a monogram which Demetrius uses on his copper coins with Artemis reverse—*P.M.Cat.*, p. 13, coin 22.

The coins of Artemidorus are very rare, but are known of several types. A close connexion has been seen between him and Menander, but I prefer to place Artemidorus with Hippostratus. The above tetradrachm supports this view, and I understand that the coins of both kings usually come from the Hazāra and Pūnch valleys. I have been permitted to illustrate the unpublished copper coin of a "panther" type in the B.M. (mentioned in *P.M.Cat.*, p. 69).

57. HIPPOSTRATUS.

The square copper coin of Hippostratus of type *B.M.Cat.*, Pl. xiv. 6, occurs in a large size; the only specimen known to me is in the Kaiser Friedrich Museum, Berlin. I have been permitted to illustrate it.

The tetradrachms of Hippostratus are commoner than the drachms, which are very scarce.


Æ. Square. (Pl. XVII. 4.)
Berlin (from C. R. Fox, 1873).

58. TELEPHUS.

Obv.
"Zeus" seated on throne placed slightly left; long sceptre in l. hand; r. arm outstretched.
On three sides Gr. legend:—
**ΒΑΣΙΛΕΩΣ ΕΥΕΡΓΕ-
ΤΟΥ ΤΗΛΕΦΟΥ**

Rev.
Figure, apparently male, naked except for some sort of head-dress, squatting to r. on lotus(?); r. arm outstretched.

Kh. legend:—
*Maharajasa kalanakramasa
Teliphasa.*

In l. middle field 

Æ. Square. (Pl. XVII. 6.) W. S. Talbot.


59.

Obv.

As No. 58.

Rev.

Male figure with cloak and spear, wearing a conical cap, walking r. Kh. legend as on No. 58. To r., tiny representation of a mountain as on the Kāpisi coin of Eucratides described at No. 5 above.

Also mon. 

Æ. Square. (Pl. XVII. 5.)

B.M. 1.

The coins of Telephus are very rare. The two monograms are found elsewhere only on the coins of Maues. Coin 58 was published by Mr. Vincent Smith in *Numismatic Notes and Novelties*, J.A.S.B., 1898. The above specimen was found by Mr. Rawlins in Haripur, Hazāra District. I cannot conjecture the significance of the strange reverse design. The same monogram **TA** is found on several square copper coins of Maues, some of which have been excavated by Sir John Marshall from the site of Taxila. It may stand for Taxila.

Coin No. 59 was in my collection. It is specially interesting as being the only other coin, in addition to No. 5, to show a representation of the mountain at Kāpisi, where the elephant-god was worshipped. I have already suggested in my account of coin No. 5 that this Telephus coin may be of Kāpisi mint. There is another specimen in the Lahore Museum—*P.M. Cat.*, Pl. viii. 640—once in my possession, and Sir John Marshall got one at Taxila itself.

I see a close bond in time and place between Telephus and the first Indo-Scythic king Maues, whose approximate date is 75 B.C., fifty years before the end of the reign of Hermaeus (*C.H.I.*, p. 701), the territory

associated with both being Taxila and Kāpisa; between Theophilus and Nicias, both being linked with Diomedes and Philoxenus in Gandhāra on both sides of the Indus; between Artemidorus and Hippostratus, the latter being intimately connected by his monograms with the early coins of Azes. It is noteworthy that the tetradrachms of Hippostratus have twice to my knowledge been found in association with those of Azilises. A splendid find was made in Kashmīr State territory, probably in Pūnch, some thirty years ago, from which practically all the fine tetradrachms of Hippostratus and Azilises described in the *P.M.Cat.*, and figured in Plates viii and xiii came. These pieces were practically unworn. The other find was sent to me in 1921: it contained seven tetradrachms of Hippostratus and thirty-two tetradrachms of Azilises. Hippostratus is also connected by monogram with Apollodotus II. I place him in Hazāra and the Peshāwar valley.

60. HERMAEUS AND CALLIOPE.

<i>Obv.</i>	<i>Rev.</i>
Conjugate diademed busts of Hermaeus and his queen Calliope to r.	King in full war panoply on prancing steed to r.; spear slung on near side of horse; bow in case on the other.
Gr. legend:— ΒΑΣΙΛΕΥΣ ΣΩΤΗΡΟΣ ΕΡΜΑΙΟΥ ΚΑΙ ΚΑΛ- ΛΙΟΠΗΣ	Kh. legend:— <i>Maharajasa tratarasa Hera- mayasa Kaliyapaya.</i> Underneath mon. K 1.

AR. Wt. 149.5. (Pl. XVII. 8.) B.M. 1.

61. As No. 60, but different style, and ΚΑΛΛΙΟΠΗΣ (*sic*). The monogram is K 3.

AR. Wt. 145. (Pl. XVII. 7.) B.M. 1.

The find contained the first tetradrachms of Hermaeus and Calliope to be discovered. They are of the same type as the drachm, which is fairly common; it always bears mon. K 3. The two pieces differ greatly in style; coin No. 60 is superior but badly struck. I believe all these Hermaeus and Calliope coins were struck in the Kābul region. The unique "king on horseback" and "enthroned Zeus" drachm of Hermaeus—Cunningham, *Num. Chron.*, 1872, p. 168 (now in B.M.)—provides a connecting link between the coins just discussed and the normal silver coins of Hermaeus.

62-63. HERMAEUS. There were two tetradrachms of Hermaeus in the find, of the very rare helmeted head type (smooth helmet), which seems to have been struck only in the Kābul region. Coin 62 has monograms K 1 and Σ ; coin No. 63 has mon. K 3. Cp. *Num. Chron.*, 1887, Pl. vii. 9. In this type Zeus appears to be wearing a Phrygian cap, and the two-horned object in his r. hand is fairly clear. I illustrate coin No. 62.

R. (Pl. XVII. 9.)

B.M. i.

64. I illustrate the reverse of this tetradrachm, not from the Kābul find, as it shows so well the radiation around the head of the enthroned god, and the shape of the top of the sceptre. The object in the right hand is not so clear.

R. (Pl. XVII. 10.)

B.M. 1.

65. On the reverse of this semi-barbarous tetradrachm, not from the Kābul find, the word *maharajasa* is written *maharayasa*.

R. (Pl. XVII. 11.)

B.M. 1.

Hermaeus is connected by his monograms with Amyntas, Heliocles, and Strato, Eucratides, Menander,

and Azes. One of his monograms occurs on the "Bactrian camel and yak" coin of Azes—*P.M.Cat.*, Pl. xii. 305—which would place it somewhere high up towards the Bactrian frontier. Several Indo-Bactrian monograms occur for the first time in the reign of Hermaeus. His dominions were widely extended, and he seems to have exerted authority from Jhelum to Kābul. There may have been some amicable arrangement with the Sakas.

66. MAUES. A square copper piece with usual legends. The obverse design is that of the king on horseback to r., holding whip; in r. lower field Kh. *pri*. On the reverse is a female deity with flowing draperies standing r., wearing turreted crown. She holds an object (patera?) on outstretched r. hand, and her l. hand rests on a wheel.

In l. upper field Kh. *mi*.

" r. " " " *da*.

The reverse design and Kh. monograms of this new coin are those of round coin *B.M.Cat.*, Pl. xvi. 3, which I believe is still unique.

Lt.-Col. G. M. C. Smith.

67. AZES. We have had to wait a long time for the tetradrachm size of the Azes drachm, *P.M.Cat.*, Pl. xi. 187. I had two specimens. The mon. is the same as that of the drachms. The object in the extended right hand of Zeus is distinctly shown.

Obv.

ΒΑΣΙΛΕΩΣ ΒΑΣΙΛΕΩΝ
ΜΕΓΑΛΟΥ ΑΖΟΥ

Zeus to l. with long sceptre;
thin, curved object in
outstretched r. hand.

Rev.

Kh. legend *Maharajasa raja-
rajasa mahatasa Ayasa*.

Winged Nike to r., with
wreath and palm.

To r. mon. (*P.M.Cat.*, p. 218,
29).


R. Wt. 145. (Pl. XVII. 12.)

B.M. 1.

68. For comparison with 67 I illustrate the reverse of a Cunningham tetradrachm of a Nike type which still remains unique. The obverse design is the usual mounted king. Drachm size not known.

R. Wt. 140. (Pl. XVII. 13.) B.M.

69. SPALIRISES.

<i>Obv.</i>	<i>Rev.</i>
Mounted king to r., with couched spear.	Zeus facing, with sceptre and thunderbolt.
Gr. legend :—	Kh. legend :—
ΒΑΣΙΛΕΥΣ ΜΕΓΑΛΟΥ	<i>Maharajasa mahamtakasa</i>
ΠΤΑΛΙΡΙΣΟΥ	<i>Spalirisa.</i>
	Mon. 

R. Wt. 36. (Pl. XVII. 14.) B.M. 1.

A new silver coin of Spalirises as king ; duplicate in the Srinagar Museum, Kashmīr.

70. KANISHKA. I am allowed to illustrate a new stater of Kanishka in the Cabinet of Mr. R. Sutcliffe, Burnley (from Sir John Stanley). Coins of Kanishka with the Greek title *Basileus basileon* are fairly common in copper (with Helios and Nanaia reverses), but extremely rare in gold—*P.M.Cat.*, p. 186. Six specimens of the latter were known to me ; in the B. M. one Helios, one Hephaistos, and two Salene ; at Paris, one Salene ; at Berlin, one Helios (from C. R. Fox, 1873). The new type is a Nanaia, not altogether unexpected in view of its existence in copper.

A. (Pl. XVII. 15.) R. Sutcliffe.

SUPPLEMENTARY NOTE ON FINDS AND FIND SPOTS.

No find of Bactrian or Indo-Bactrian coins was officially reported during the fourteen years I inspected Treasure Trove on behalf of the Punjab Government. Information as regards the N.-W. Frontier Province could probably be provided by the Curator, Peshāwar Museum. In addition to the information on finds and find spots already given in the text, I jot down the following:

1. A large find of drachms, much on the lines of the Sonepat hoard (*B.M.Cat.*, p. xxxvi), was made somewhere in the Rohtak district about the early part of the year 1918. I saw 100 coins, the rarest of which were two "helmeted javelin-thruster" drachms of Amyntas.

2. A small find of drachms—Apollodotus, Menander, Antialcidas, Antimachus Nikephoros—at Dūdiāl, Hazāra District, in 1906.

3. In the summer of 1911 I officiated as Deputy Commissioner of Attock. Coins of twelve kings from Demetrius downwards, usually poor and illegible, were brought from a site called Jalālia on the Indus, a little north of Hazro. The coins of Demetrius were two specimens of *Num. Chron.*, 1869, Pl. iv. 7.

4. A find of 45 drachms (29 Menander) was made at Kutehra Jaswālanwala, near Gugret, Hoshiārpur.

Mr. W. S. Talbot, C.I.E., formerly Settlement Officer of Jhelum District, and Mr. J. P. Rawlins, Indian Police (retired), a well-known antiquary and coin-collector, have kindly given me information about the N.-W. Punjab. In the Jhelum District, drachms of Apollodotus, Menander, and Hermaeus are commonly found. The usual types of Eucratides, Antialcidas, Antimachus Nikephoros, Philoxenus are fairly plen-

tiful. Nearly all the others except Diodotus and Sophytes are occasionally found. Mr. Rawlins specially mentions the vicinity of Tangrot, both the Jhelum and Pūnch sides of the river, as teeming with ancient remains. Of Hazāra he says: "Excepting the Peshāwar district, including Yusafzai, there can be no country so full of ancient remains as the Hazāra district. Haripur and Mansera are sure find spots for all ancient coins. From north to south, from Shinkiyari to Haripur, all along both banks of the Indus, are ancient sites." In addition to Haripur and Mansera, Mr. Rawlins specially mentions Torbela and its vicinity on both sides of the Indus, Dacca, and Khanpur. At Shinkiyari is a great *stūpa*, the largest after Mankiala that he had seen. Of Hoshiārpūr (the sub-montane and hilly tract from the Bēas to the Sutlej river) Mr. Rawlins says, "Here we are in quite another country, and quite another ancient civilization, where one finds the remains of the early Hindu and White Hun dynasties." Adding the ubiquitous Kushāns, I agree with this estimate, which I think also applies to the Pathānkot locality (sub-montane Bāri Doab), Kāngra valley, vale of Kashmīr, and the Indus valley below the Salt Range.

Cunningham was the first collector in British territory, and reaped the results of age-long accumulations and dispersals. Hence the distribution as noted by him was abnormal. Captain E. Conolly, writing from Kandahār in 1839, reported that Bactrian coins were very rare in Kandahār, Herāt, and S. Afghānistan. Seistān, expected to be an Eldorado for Bactrian pieces, produced Indo-Parthian and numerous Arsakid and Sassanian coins (*J.A.S.B.*, 1840).

R. B. WHITEHEAD.

XIV.

A HOARD OF ROMAN COINS DISCOVERED IN CRETE.

THE thirty-seven coins described in this paper formed part of a hoard of Roman Coins discovered in Crete towards the end of the last century. The find was brought over to Athens and the late Mr. Earle Fox, who happened to be there at the time, was fortunate enough to be able to secure many of the coins. During his lifetime we had often discussed these coins together, and, after his lamented death in 1920, I learnt that he had very kindly left me this part of his collection.

It is rather a pity that he, with his extraordinary knowledge of the subject, has left no record of this interesting find. But, as the coins themselves are now in my possession, I feel that it is my duty as well as a pleasure to put on record a short statement concerning them.

The period covered by the find appears to have extended from about the time of the Emperor Maximin I (A.D. 235-238) to the middle of the reign of Licinius, that is to about A.D. 314.

The coins are all covered with a fine light green patina and are nearly all in mint condition. The earlier period is only represented by three sestertii, but originally there were probably more coins of this class, the remainder consisting of coins of the follis type and its subdivisions. The references are to

Cohen, *Monnaies frappées sous l'Empire Romain*, 2nd Edition, and, unless otherwise stated, the bust on the obverse is laureate to right.

Maximus, son of Maximin I, Emperor A.D. 235-238.

1. *Obv.*—C IVL VERVS MAXIMVS CAES. Bust draped to r.

Rev.—PIETAS AVG. Capis between lituus and secespita on l. and simpulum and aspergillum on r. In exergue S C

Weight 298grs., 19.31 grammes. Cohen 5.

Gordianus III. A.D. 238-244.

2. *Obv.*—IMP CAES M ANT GORDIANVS AVG
Bust laureate and draped to r.

Rev.—LIBERALITAS AVG II. S-C. Liberality standing to l. holding tessera and a double cornucopiae.

Weight 257 grs., 16.65 grammes. Cohen 136.

Philip II, son of Philip I, Emperor A.D. 244-249.

3. *Obv.*—M IVL PHILIPPVS CAES. Bust draped to r.

Rev.—PRINCIPI IVVENT. S-C. Philip junior in military habit advancing to r., holding in his l. hand a globe and in his r. a spear.

Weight 330 grs., 21.38 grammes. Cohen 49.

The following table shows a list of the various emperors whose coins make up the main portion of the hoard and also the various mints at which the coins were struck :

Mint	Diocletian	Maximianus Herculeus	Constantius Chlorus	Galeria Valeria	Severus II	Maximin II	Licinius I	Constantine I	Total
Alexandria.	1	..	..	2	2	1	6
Antiochia	1	..	1	2
Aquileia	1	..	2	..	..	1	4
Carthago (Karthago)	1	1	..	..	..	..	..	2
Cyzicus (Kyzicus)	1	..	..	4	..	1	1	7
Heraclea Thraciae	5	..	..	..	5
Nicomedia	1	..	1
Serdica	1	1	..	..	..	2
Siscia	1	..	..	..	1	..	..	..	2
Thessalonica	1	..	..	1	1	3
	1	2	3	2	13	3	5	5	34

Diocletian. A.D. 284-305.

SISCIA.

4. *Obv.*—IMP DIOCLETIANVS P F AVG.*Rev.*—SACRA MONET AVGG ET CAESS NOSTR.

Moneta standing to l. holding scales and

cornucopiae. $\frac{\ast}{[SI]S}$

2 Æ. Size 28 mm. Weight 185 grs.,
11.99 grammes. Cohen 435.

Maximianus I. A.D. 286-305.

CARTHAGO.

5. *Obv.*—IMP MAXIMIANVS P F AVG.

Rev.—FELIX ADVENT AVGG NN. Africa standing
to l. holding standard and elephant's tusk.
At her feet to left a lion, holding in its paws

a bull's head. $\frac{H}{PKB}$

2 Æ. Size 28 mm. Weight 158 grs.,
10.24 grammes. Cohen 106.

CYZICUS.

6. *Obv.*—D N MAXIMIANO FELICISSIMO SEN AVG.

His bust laureate to r. with imperial mantle, holding olive-branch and mappa.

- Rev.*—PROVIDENTIA DEORVM QVIES AVGG.

Female figure (Providentia) on l., standing r. : on r. facing her is Quies holding an olive-

branch and leaning on sceptre.

*
S | F
KA

2 Æ. Size 27 mm. Weight 169 grs.,
10.95 grammes. Cohen 489.

Constantius I. A.D. 292-306.

ALEXANDRIA.

7. *Obv.*—FL VAL CONSTANTIVS NOB CAES.

- Rev.*—GENIO POPVLI ROMANI. The Genius of the Roman People standing to l., holding

patera and cornucopiae.

XX | Γ
I
ALE

2 Æ. Size 27.5 mm. Weight 152 grs.,
9.85 grammes. Cohen 89.

AQUILEIA.

8. *Obv.*—CONSTANTIVS NOB CAES.

- Rev.*—SACR MONET AVGG ET CAESS NOSTR.

Moneta standing to l. holding scales and

cornucopiae.

U | III
AQΓ

2 Æ. Size 28 mm. Weight 189 grs.,
12.25 grammes. Cohen 264.

CARTHAGO.

9. *Obv.*—IMP CONSTANTIVS P F AVG.*Rev.*—SALVIS AVGG ET CAESS FEL KART.

Female figure standing l. holding in each

hand a branch of fruit

H	|
—	
A	|

2 Æ. Size 28 mm. Weight 152 grs.,
9.85 grammes. Cohen 272.

Galeria Valeria, wife of Galerius.

SERDICA.

10. *Obv.*—GAL VALERIA AVG. Her bust to r. diademed
and her hair confined by a series of bands.
She wears imperial mantle.

Rev.—VENERI VICTRICI. Venus standing to l. hold-
ing apple in r. hand, and holding up her veil with

her left.

*	|	Δ
—		—
.SM.SD.		

2 Æ. Size 24 mm. Weight 101 grs.,
6.54 grammes. Cohen 3.

THESSALONICA.

11. *Obv.*—GAL VALERIA AVG. Her bust diademed to
r., her hair confined with a single band. She
wears a stole.

Rev.—As No. 10 but mint-mark

*	|	A
—		—
.SM.TS.		

2 Æ. Size 24 mm. Weight 103 grs.,
6.67 grammes. Cohen 3.

Severus II. A.D. 305-307.

AQUILEIA.

12. *Obv.*—SEVERVS NOB CAES.

Rev.—VIRTVS AVGG ET CAESS NN. Mars
marching to r. with spear and trophy.

AQF

2 Æ. Size 26 mm. Weight 138 grs.,
8.94 grammes. Cohen 69.

13. *Obv.*—IMP C SEVERVS P F AVG.

Rev.—VIRTVS AVGG ET CAESS NN The
Emperor galloping to r. and thrusting his
spear into fallen foe who is holding up his
hands. Under horse a shield and a second
warrior lying on his back.

AQS

2 Æ. Size 27.5 mm. Weight 146 grs.,
9.46 grammes. Cohen 74.

CYZICUS.

14. *Obv.*—FL VAL SEVERVS NOB CAES.

Rev.—GENIO AVGG ET CAESARVM NN. The
Genius standing to l. holding patera and
cornucopiae.

KA

2 Æ. Size 26.5 mm. Weight 143 grs.,
9.27 grammes. Cohen 18.

15. As No. 14. Size 26.5 mm. Weight 141 grs., 9.14
grammes.

16. As No. 14. Size 26 mm. Weight 107 grs., 6.93
grammes.

17. *Obv.*—IMP C FL VAL SEVERVS P F AVG.

Rev.—GENIO POPVLI ROMANI. The Genius of the Roman People standing to l. holding

patera and cornucopiae. $\begin{array}{c} | \\ * \\ \hline \text{KB} \end{array}$

2 Æ. Size 27.5 mm. Weight 152 grs.,
9.85 grammes. Cohen 31.

HERACLEA THRACIAE.

18. *Obv.*—As No. 12.

Rev.—SAC MON VRB AVGG ET CAESS NN
Moneta standing to l. holding scales and

cornucopiae. $\begin{array}{c} | \\ * \\ \hline \text{H T} \end{array}$

2 Æ. Size 27 mm. Weight 150 grs.,
9.72 grammes. Cohen 62.

19. *Obv.*—As No. 14.

Rev.—As No. 17 but mint-mark $\begin{array}{c} | \\ \hline \text{HTT} \end{array}$

2 Æ. Size 27 mm. Weight 154 grs.,
9.99 grammes. Cohen 27.

20. *Obv.*—FL VAL SEVERVS NOBIL CAES.

Rev.—As No. 17 but mint-mark $\begin{array}{c} | \\ \hline \text{HTA} \end{array}$

2 Æ. Size 27.5 mm. Weight 153 grs.,
9.91 grammes. Cohen 29.

21. *Obv.*—As No. 20.

Rev.—As No. 17 but mint-mark $\begin{array}{c} | \\ \hline \text{HTE} \end{array}$

2 Æ. Size 27 mm. Weight 146.5 grs.,
9.49 grammes. Cohen 29.

22. As No. 21. Size 26 mm. Weight 112 grs., 7.26 grammes.

SERDICA.

23. *Obv.*—FL. VAL. SEVERVS NOB CAESAR.
(Small bust.)

Rev.—As No. 17 but mint-mark

	A
SM.SD.	

2 Æ. Size 26.5 mm. Weight 117 grs.,
7.58 grammes. Cohen 28.

SISCIA.

24. *Obv.*—FL VAL SEVERVS NOB C.

Rev.—CONCORDIA IMPERII. Concord carrying
staff and walking to left.

	VI
SISA	

2 Æ. Size 26.5 mm. Weight 145 grs.,
9.40 grammes. Cohen 5 var.

Maximin II. A.D. 305–313.

ALEXANDRIA.

25. *Obv.*—GAL. VAL. MAXIMINVS NOB CAES.

Rev.—GENIO CAESARIS. The Genius standing to

1. holding patera and cornucopiae.

K	B P
ALE	

2 Æ. Size 24 mm. Weight 104 grs.,
6.74 grammes. Cohen 40.

26. *Obv.*—IMP C GAL VAL MAXIMINVS P F AVG.

Rev.—GENIO IMPERATORIS. The Genius stand-
ing to 1. holding patera and cornucopiae.

C	Γ
K	P
ALE	

2 Æ. Size 25 mm. Weight 106 grs.,
6.87 grammes. Cohen 52.

ANTIOCHIA.

27. *Obv.*—IMP C GAL VAL MAXIMINVS P F AVG.

Rev.—SOLI INVICTO The Sun standing to l. holding in his l. hand the head of Serapis, and stretching forward his right.

FI	*
ANT	

3 Æ. Size 20 mm. Weight 73 grs.,
4.73 grammes. Cohen 161.

Licinius. A.D. 307–323.

ALEXANDRIA.

28. *Obv.*—IMP C LIC LICINIVS P F AVG.

Rev.—GENIO AVGVSTI The Genius standing to l. holding the head of Serapis in his r. hand and cornucopie under his left arm.

N	A
ALE	

3 Æ. Size 20 mm. Weight 89 grs.,
5.77 grammes. Cohen 32.

29. *Obv.*—IMP C VAL LICIN LICINIVS P F AVG.

Rev.—IOVI CONSERVATORI AVGG Jupiter standing l. holding in his r. hand a victory on a globe, in his l. a sceptre. At his feet to l. an eagle with a wreath in its beak.

☉
Δ
N
ALE

3 Æ. Size 19.5 mm. Weight 60 grs.,
3.89 grammes. Cohen 109.

CYZICUS.

30. *Obv.*—VAL LICINNIANVS LICINNIVS P F AVG.

Rev.—GENIO AVGVSTI CM The Genius standing to l. holding patera and cornucopiae.

—
MKVF

2 Æ. Size 23 mm. Weight 95 grs.,
6.16 grammes. Cohen 38.

NICOMEDIA.

31. *Obv.*—As No. 29.

Rev.—As No. 30 but mint-mark

—
SMNE

2 Æ. Size 24.5 mm. Weight 116 grs.,
7.52 grammes. Cohen 37.

THESSALONICA.

32. *Obv.*—VAL. LICINIVS P F AVG.

Rev.—GENIO AVGVSTI The Genius standing to l.

holding patera and cornucopiae.

* | Γ
—
SM.TS.

2 Æ. Size 25.5 mm. Weight 111 grs.,
7.19 grammes. Cohen 27.

Constantine I. A.D. 306–337.

ALEXANDRIA.

33. *Obv.*—IMP C FL VAL CONSTANTINVS P F AVG.

Rev.—IOVI CONSERVATORI AVGG. Jupiter standing l. holding in his r. hand a victory on a globe, in his l. a sceptre. At his feet to l. an eagle with a wreath in its beak.

—
B
N
—
ALE

3 Æ. Size 19 mm. Weight 60 grs.,
3.89 grammes. Cohen 299.

ANTIOCHIA.

34. *Obv.*—FL VAL CONSTANTINVS FIL AVG.*Rev.*—GENIO FIL AVGG The Genius standing to l. holding patera and cornucopiae.

C	|	€
ANT		

2 Æ. Size 23.5 mm. Weight 105 grs.,
6.80 grammes. Cohen 191.

AQUILEIA.

35. *Obv.*—CONSTANTINVS NOB CAES.*Rev.*—CONSERVATORES VRB SVAE A temple with six columns in which is seated Roma, holding a globe in her r. hand and a spear in

her l.

A	|	Q
A * Q		

2 Æ. Size 24 mm. Weight 104 grs.,
6.74 grammes. Cohen 74.

CYZICIUS.

36. *Obv.*—FL VAL CONSTANTINVS NOB CAES.*Rev.*—GENIO AVGG ET CAESARVM NN The Genius standing to l. holding patera and

cornucopiae.

*		*
KΓ		

2 Æ. Size 26.5 mm. Weight 159 grs.,
10.30 grammes. Cohen 171.

THESSALONICA.

37. *Obv.*—CONSTANTINVS FIL AVGG.*Rev.*—GENIO CAESARIS The Genius standing to l.

holding patera and cornucopiae.

*	|	Δ
.SM.TS.		

2 Æ. Size 25 mm. Weight 114 grs.,
7.39 grammes. Cohen 186.

I have to record my most grateful thanks to Mr. Percy H. Webb for his assistance in classifying and weighing the coins described above. In his opinion the presence of the sestertii is interesting and their similarity in condition to the coins of the follis type identifies them with the hoard. They suggest, what must be the fact, that the reform of Diocletian, thorough as it was, did not entirely sweep the older coins out of currency.

It seems, therefore, that the latter system must have provided for correlation between the new denominations and the old. Mr. Webb states that numbers 10, 11, 25, 26, and 27 fall well within the limits of weight of the similar coins described in *Num. Chron.*, 1920 (p. 208), but that numbers 30, 31, and 32 suggest that a better standard of weight was maintained at the mints represented than at Alexandria. Numbers 8 and 36 are exceptionally heavy coins.

Numbers 29 and 33 may be said to fix the date of the deposit as about A.D. 314, and the contents of the hoard appear to support the view that the follis, notwithstanding its successive reductions in weight, did not officially alter its position in the tariff. However, the evidential value of the find is seriously impaired owing to the fact that it is now only possible to describe a portion of it.

G. C. HAINES.

MISCELLANEA.

HIMYARITE COINS.

By the courtesy of Messrs. A. H. Baldwin & Sons, I have recently been able to examine a parcel of Himyarite coins whose appearance shows them to have come from a find. In fact, information in the owners' possession leaves little doubt that they formed part of the great San'a hoard, which appears to be the source of all the known coins of this class.

In the lot examined there were 345 coins in all, and as Head in the first (incidental) notice of the hoard (*Num. Chron.*, 1878, p. 278) gave the number at about 300, which presumably includes the 200 obtained and published by Schlumberger (*Trésor de San'a*), it will be seen that our knowledge of the contents of the hoard is considerably increased. The new portion is made up as follows:

I. *With laureate head.*

Units.

B.M.C., <i>Arabia</i> , pp. 54-6, Nos. 2-11	
(a) With letter above tail	57
(b) With letter below tail	20
B.M.C., pp. 54-6, No. 12	3
" No. 12 <i>bis</i>	1
" p. 57, Nos. 14-15	3
" " Nos. 16-17	4
Variant of B.M.C., p. 58, No. 21 (with monogram on r. reversed)	1*
B.M.C., p. 59, Nos. 23-26	58

Halves.

B.M.C., p. 58, Nos. 18-20	2
No. 22	2
Variant of B.M.C., p. 58, No. 22 (with monogram and symbol on r. reversed)	1*
B.M.C., p. 59, Nos. 28-30	2
Variant of B.M.C., p. 59, Nos. 28-30 (letter on l. replaced by ∇)	3*
Uncertain Monograms	3

Quarters.

Types of the halves, B.M.C., p. 58, Nos. 18-19 but with letter X beneath monogram on l. of reverse	12*
Types of the halves, B.M.C., p. 58, Nos. 18-19, but with letter X beneath monogram on l. of reverse and behind head on obverse	1*

II. With "*Augustan*" head.*Units.*

B.M.C., p. 60, Nos. 32-33	3
" p. 61, Nos. 34-35 and 37-39	29
" " No. 36	2

Halves.

B.M.C., p. 62, No. 40	1
" " No. 41	26*
" " No. 42	15

Quarters.

B.M.C., pp. 62-63, Nos. 44-48	96*
	<hr/> 345

* denotes that specimens have been retained for the Museum Collection.

The quarters with the laureate head obverse are the most interesting: both the denomination and the letter X seem to be unrecorded hitherto in the laureate head series, though both appear in the later series with the "Augustan" head:—units with X on obverse B.M.C., p. 60, Nos. 32-33; with X on reverse B.M.C., p. 61, No. 36; quarters B.M.C., p. 62, Nos. 44-48. The new coins would therefore form a link between the two series. At least two of the quarters with the Augustan head were overstruck: what coins served as blanks for them I have not been able to make out, but that they were Greek or Roman, and not earlier coins of the same class, is shown by clear traces of the previous inscription.

E. S. G. R.

REVIEWS.

The Temple Coins of Olympia. By CHARLES T. SELTMAN. Reprinted from *Nomisma*. With a foreword by Sir WILLIAM RIDGEWAY. Pp. ix+117. With 12 plates. Cambridge. Bowes and Bowes. 1921.

WE have delayed too long to notice this extremely useful publication, and it must already be familiar to all those who are likely to read what follows. It is therefore unnecessary to describe its contents in detail. As a work of reference it bears the test of usage very well. The descriptions are accurate, the distinctions of the various dies, so far as we have had occasion to go into them, correct. Recent revelations make it necessary to exclude from the category of genuine coins not merely No. 129, noted by the author in his preface, but the more obvious No. 327, which, indeed, had been already noted by some as a forgery, whether made by the notorious Athenian forger or a false original copied by him.

It has long been recognized that the coins of "Elis" had more to do with Olympia than with the city of Elis. Mr. Seltman draws the corollary that they were actually struck at Olympia, in the precincts of the temples of Zeus and Hera. These buildings, or at any rate the venerable Heraeum, had not much room to spare, and it is indeed doubtful whether the Temple of Zeus existed before the Persian wars. Mr. Seltman says there was the great altar, and "it is immaterial for our purposes whether the Zeus mint was at first attached to the temple, or the altar of the god". There must, of course, have been some sort of treasury, for Olympia was very rich, and the Eleans, even before the synoekism, were a great financial power in virtue of their control of the place. The temple of Hera was much older than any temple of Zeus, indeed, the oldest of the temples on the site. If Mr. Seltman is right in his theory that the mint which produced the coins with the head of Hera was a separate one, why did it only begin to function late in the fifth century? His explanation is that it was not wanted until the "boom" which followed the

peace of 421. Still, why, if it was exclusively under the patronage of Hera, is the reverse type invariably associated not with the goddess but with Zeus? We should have expected to find some allusion to Hera instead of the eagle and the thunderbolt. The occurrence of these Zeus emblems on them seems clearly to indicate that the same financial authority controlled both mints. There is, after all, no necessity to assume that there were two separate establishments. If the bullion from which the Hera-coins were struck came from her special treasure, care would be taken not to mix the dies with those used for the coins struck out of the treasure of Zeus. But it is unnecessary to assume that the cramped precincts of the Heraeum were made to accommodate a mint. Mr. Seltman rejects the view that the appearance of the head of Hera, which he dates about 421, had anything to do with the alliance concluded between Elis and Argos in that year. His reasons for the rejection do not seem convincing, although of course it is unnecessary to maintain that the type on the coins of Argos inspired that on the coins of Olympia; it was rather the other way about. But it may well have been that in connexion with the treaty of 421 the new Hera type was invented as a memorial of the understanding between Elis and Argos.

In his section on the metrology of the coins, Mr. Seltman decides that there was a special Olympian standard. Most of those who have striven to find a way through the problem of the Aeginetic standard will smile wearily at this new growth among the thorns which beset their path. Mr. Seltman is much too subtle, when it is remembered that the condition of preservation of the coins with which he deals is below the average (Olympian coins had an immense circulation, as the numerous punch-marks on them suffice to show) and that the range of weight, as in most examples of the early Aeginetic system, was very great. His averaging of the ten heaviest specimens, or the heaviest 10 per cent. of each group, is only darkening counsel. That the norm on which he fixes, 12.44 g., should be the true one, is quite incredible. Only some half a dozen specimens out of his 872 reach that weight! If he will make a table of frequency he will see that the norm must have been somewhere about 12.20 g. or 12.25 g. He says that his norm of 12.44 g. is confirmed by the weights of the gold coins of the Pisatans, which, by their types, are shown to have been equivalent to $1\frac{1}{2}$ and 1 silver stater respectively; and at the ratio of 12:1 they would be so equivalent if the silver staters weighed

12.44 g. The theory that gold coins were always made to pass for an integral number of silver pieces needs re-examination. All that the types of the gold prove is that the larger coin was three-halves of the smaller. But let us admit that they were equated in the way he maintains. Still, it does not do to be too definite about the ratio of gold to silver at the time in question; and, as Greek money-changers were as sharp and the market as sensitive as any of the present day, it is wrong to assume that the ratio was always one of integral numbers. True, the pseudo-Platonic *Hipparchus* definitely records the ratio 12:1; but fairly early in the fourth century it was lower, something between 12:1 and 11:1 (so the passage in *Lysias de bonis Aristophanis*), and there are other passages from which ratios such as 11.76:1 and 11.20:1 can reasonably be inferred. Now at 11.77:1 the smaller gold coin of 1.04 g. would be equivalent to 12.25 g. of silver, and at 11.73:1 to 12.20 g. of silver. So that, if Mr. Seltman will have it that the gold coins were worth 1 and $1\frac{1}{2}$ silver staters, we make him a present of this calculation.

The book, though the author's theories may not be fully made out, is, in its practical part, indispensable, and we are glad to know that he is occupied on another piece of detailed research of the same kind.

G. F. H.

M. v. BAHRFELDT: *Die römische Goldmünzenprägung während der Republik und unter Augustus. Eine chronologische und metrologische Studie.* Mit 16 Tafeln u. 21 Textabbildungen. Pp. xvi+208. Halle (Saale). A. Riechmann & Co. 1923.

THIS is the first of a series entitled "Münzstudien" to be edited by the author of this volume (who will be responsible for ancient numismatics) and Dr. H. Buchenau (who will take charge of the Middle Ages). No one will grudge praise to the publishers, who in these cruel times are willing to risk their capital on a venture which, scientifically important as it may be, can enjoy but a small measure of public support. How far it is the best method of funding the scientific energy of the German numismatists is another question. When we hear that both of the two leading publications in their country, the Berlin *Zeitschrift für Numismatik* and *Nomisma*, are in acute financial difficulties,

we may be permitted to hazard the suggestion that some sort of combination rather than a new issue would have been the desirable policy.

This, however, does not affect our judgement of the book before us; and it is hardly necessary to say that it has all the excellences which experience has taught us to associate with the author's work; of which the most obvious are his meticulous care of detail, and his exhaustive accumulation of facts within the limits which he sets himself. Books like this cannot be satisfactorily reviewed until one has used them for about a year, by which time one has discovered in what points, if any, they fail to meet one's requirements. Here we must be content to mention a few things which are apparent on a cursory reading.

The first four chapters of the book complete the history of the coinage to the death of Augustus. A fifth gives a more summary but very useful account of the gold coinage down to the death of Nero. The sixth chapter is metrological, and an appendix deals with the finds of Caiazzo, Brescello, and Ambenay. The plates, though not up to pre-war level, are very creditable.

First, a few words on the metrological method. For every issue—i.e. for every variety which requires a separate entry—the author gives the weights of every specimen available, and draws an average, omitting from his calculation such less well-preserved or damaged specimens as he has noted. The greater the number of specimens weighed, the nearer does the average approach to the normal. It is always a little lower, so that we must make an allowance, for the fixing of which there is no rule. In enunciating this principle (p. x) the author makes no mention of the frequency-method, or of Regling's method as expounded in *Klio* XIV, but unhesitatingly accepts Dr. Haeberlin's assertion that, for the Roman sphere, the average-method of ascertaining the norm is the only correct one. This assumes that the coins were always struck *al marco*. If they were struck *al pezzo*, the averaging system is misleading. A mint-workman, told to produce a number of coins each of a certain weight, would presumably weigh his blanks against a standard weight, throwing out all pieces above that weight, but not troubling himself about small deficiencies. Any variation in the extant specimens would then be below the norm, and due to loss of weight by attrition. It may be assumed that in the case of issues *al pezzo* over-weighted coins are exceptionally rare. In such cases the use of the

average is sure to bring out a result well below the norm. And, even if the coins were issued *al marco*, are we to assume that they were never tested in any way before issue, so that very abnormal weights could be returned to the melting-pot?

In any case, the frequency-method, by ignoring in the result, though not in the working out, all the isolated high or low weights, seems likely to give a truer result than the averaging-method, in which excessively high or low weights all have their effect. It automatically eliminates both badly worn and abnormally weighted specimens. In series in which we do not know the state of preservation of the specimens whose weights are recorded, this is most important. And there are not half a dozen series in which this information is available in the degree in which it is supplied by Dr. v. Bahrfeldt in this book.

It may be permissible here, in order to compare the two methods, to give an example which happens to be at my hand, taken from the denarii attributed to the Roman mint (as distinct from supposed extra-Roman issues) during the period 91 to 50 B.C. Haeberlin (in his *Römisches Pfund und Republikanische Silberprägung, Frankf. Münzzeitung*, 1918) has given his results for the series which he includes between 90 and 60 B.C.; but as he does not state exactly which series he so includes, I cannot say how far they coincide with those (taken from the British Museum Catalogue) to which I have applied the frequency-method. Be it noted that Haeberlin is working with a collection of specimens selected for their good preservation, whereas the British Museum collection can in this respect only be described as attaining a good average. Here are the figures:

Average of			
2,481 denarii in Haeberlin Coll.	.	.	3-893 g.
2,017 " B. M.	.	.	3-855 g.
4,498 " both combined	.	.	3-874 g.

Now by the frequency-table (with intervals of .05 g.) the highest frequency-point for the 2,519¹ coins of the period 91 to 50 B.C. in the British Museum is quite definitely marked at 3.90 g., which is a trifle higher than the result (3.893 g.) obtained by Haeberlin by averaging 2,481 coins, which he says are in better condition than those in the

¹ Haeberlin deals with only 2,017 coins, his period ending ten years earlier than the one with which I work, and which contains 2,519.

British Museum. It is nearly 0.05 g. (to be precise 0.045 g.) higher than the result which he has obtained by averaging 2,017 of the same British Museum coins. It is even more definitely in excess of the average of the 2,519 British Museum coins which I myself have taken into calculation (3.848 g.). 404 specimens (or nearly one-sixth of the whole) reach this point of 3.90 g. (according to the system by which all pieces weighing from 3.92 g. to 3.88 g. are entered on the 3.90 g. line). It seems clear that the frequency-method, in this case at least, gives a result which is (1) higher than the average, (2) is nearer the true norm; since, when working with comparatively poorly preserved specimens, it gives an even higher result than the average obtained from better preserved coins. If Dr. Haeberlin were to work out the frequency-table with his own coins we may conjecture that he might find the highest point at 3.95 g. Except in the ideal conditions in which the state of preservation of every specimen is perfect, I contend that the frequency-method is a safer guide than any other.

For the gold, on the basis of Dr. v. Bahrfeldt's figures, I find that the frequency-table gives 8.05 as the norm for the aureus, both in the first period, under Julius Caesar (Nos. 18-28, omitting No. 22), where his highest average is 8.08; and in the period from the death of Caesar to the death of Antonius (Nos. 24-108, omitting 27, 28 a, 44 a, 55 a, 66 a, 80, and 81). In this latter period two of his groups rise to an average of 8.06: but, taking them all round, it looks as if the average and the frequency methods give pretty much the same results. It is noticeable that the aurei Nos. 104-108, which are probably later than the period in which they are included, are distinctly lower in standard. Dr. v. Bahrfeldt's method of averaging each group by itself has the advantage of bringing this sort of thing out very clearly. I have not carried my investigations down to the later period.

Neither method is perfect. But each has its advantages, and I am inclined to think that both ought to be employed. Among the incidental advantages of the frequency-table we may reckon first the fact that it lays no claim to be more than an approximation to the truth; it has not that "sogenannte Genauigkeit" of which the botanist Sachs used to complain in the calculations of some of his scientific colleagues. For the most part, researches such as those of Haeberlin and v. Bahrfeldt are not available as the foundation of our calculations. We have to work from weights

given in scattered publications, without indication of the state of the specimens. And it must be admitted, alas! that the weights given are too often inexact. The most careful may make a mistake in weighing. And any one who attempts to collect the weights, for instance of Cyzicene electrum, will soon begin to suspect that one of the main sources of his information, while apparently giving weights to 0.01 g., has, in fact, contented himself with being correct to 0.05 g. It is much more scientific, then, to be content with working to 0.05 g. than to pretend to greater accuracy. Perhaps the best way is to make lists on Regling's plan, and then combine them into tables of frequency with intervals of 0.05 g. Then everything is on record. A second advantage of the frequency-table is that it exhibits graphically certain things which a mere contemplation of numbers does not impress upon one. For instance, the greater or less steepness of the curve leading up to the highest point is a graphic expression of the greater or less regularity of the weights. In the period 269-124 B.C. the Roman denarius has an extraordinarily wide range (5.20 g. to 2.90 g.). The average of 283 coins is 3.85 g.; the frequency summit is at 3.80 g. In the next period (124-89 B.C.) there is a much narrower range (635 coins with max. 4.15 g., min. 2.61 g.); the average is 3.83 g., the frequency summit 3.90 g. In the brief third period 88-86 B.C. the range is again narrowed (553 coins with max. 4.35 g., min. 3.05 g.). The average is 3.87 g.; the frequency summit, as in the preceding period, 3.90 g. The gradient in the second and third periods is very steep in comparison with the first. Passing to the second half of the first century B.C., the period of the Civil Wars and of the reconstruction under Augustus, I note of 509 coins, of the period 49-3 B.C., that the maximum is 4.50 g., the minimum 2.60 g., the average 3.80 g., and the frequency summit 3.85 g. The gradient is much less steep: the range much wider in proportion. It seems indicated that the political disturbances of the time left their mark on the mint, lowering the effective if not the legal standard slightly, and affecting the accuracy of the division. In the earliest Republican period it is equally clear that less care was taken, or less efficient instruments used, in making the blanks true to weight. The average is actually higher than the frequency summit, a very unusual thing. All this comes out clearly to the eye if the graphic tables are constructed.

But this excursus on metrological method has drawn us

far from Dr. v. Bahrfeldt's book. Our readers must not think that the volume is solely concerned with metrology. Each group of coins is considered carefully from nearly all points of view. Occasionally, one might wish for a little more than we get. Thus the reverse type of No. 17 of Julius Caesar is described merely as a trophy; the pertinent fact that the arms are Gaulish (tunic, horned helmet, shield, and karnyx) is not noticed, and the addition in the field of a sacrificial axe, which has probably nothing to do with the trophy, is ignored. On this coin, also, with the supposed reference to Caesar's fifty-second year, reference might have been made to Rice Holmes's discussion of the date of Caesar's birth in the *Journal of Roman Studies*, VII. But where one gets so much it is ungrateful to ask for more. Especially interesting, and sometimes drily amusing, are the author's accounts of doubtful coins and the vicissitudes through which certain great rarities, like the Lefroy aureus of M. Antonius and Octavia now at New York, have passed. One would have liked his views about the "medallion" of Augustus recently acquired by Madrid, but it is not difficult to guess what they are. It is interesting to see that he accepts Giesecke's dating of the early gold with the head of Mars. It is curious how these coins have been gradually pushed higher up, until they are now supposed to be contemporary with the earliest denarii. I, too, am inclined to discard my previously published view (though it had not so long ago received the support of Haeberlin) in favour of Giesecke's. Indeed, I would go farther than the author along Giesecke's lines, for he does not seem to me to see that, low as the latter's assumed relation of 1:8 for silver to gold may seem, it appears to harmonize with conditions existing at the time in Sicily. But it is possible that the assumption on which nearly all our calculations of the relation of the metals are based, viz. that a round number of pieces of silver was always exchangeable for a piece of gold, is fallacious. The whole basis of these investigations requires searching examination.

In tracking down the mistakes of his predecessors the author is a veritable sleuth. But as regards the aureus with the heads of M. Antonius and Julius Caesar (No. 28 a = B.M.C. ii, p. 397, No. 52), the weight of which is given by Grueber as 122.6 grains = 7.94 grammes, whereas according to the author it is really 108.2 grains = 7.01 grammes, I hasten to assure Dr. v. Bahrfeldt that he is wrong in respect of the weight. The piece really weighs 122.6 grains. It

was certainly at one time suspected, for the word "false" is pencilled on the ticket below it in a hand which I do not recognize. Paris also gets its "paquet"; No. 55 a (the author's suspicions of which Babelon regards as unfounded) weighs, according to the author, only 6.75 g. instead of the stated 8.0 g., so how can it be genuine?

Finally, we may note that the author laments the absence in the recently published British Museum Catalogue of any indication of the state of preservation of the specimens. He himself has a scale rising from m., through g., z.g., s.g., to vorz. What precisely does this scale mean? Only one stage is defined (p. ix): "Mit 'sehr gut erhalten' bezeichne ich also eine Münze, deren Schrötling in allen seinen Teilen unversehrt ist und durch den Umlauf keinerlei Abnutzung und damit Gewichtsminderung erfahren hat" "Vorzüglich" then presumably means what we should call in mint condition, with the bloom on, and the French F.D.C. Some indication of condition is certainly desirable, but I doubt whether it is possible to get a scale which will not vary, not merely from person to person, but from time to time in the same person. And it is astonishing how much attrition a coin may suffer without losing weight to a degree that matters, regard being had, as already remarked, to the futility of investigations which aim at "sogenannte Genauigkeit". Therefore, while accepting Dr. v. Bahrfeldt's demand that something should be done in the matter, I suggest that the scale should not be too elaborate, and be limited to two degrees, viz. (1) much worn = stark abgenutzt = très usé; (2) slightly worn = etwas abgenutzt = peu usé. All other coins should be regarded as not having suffered any loss, so far as one can judge. It is obvious that the mere loss of the bloom on a coin makes no difference to its weight; there is, for metrological purposes, nothing to choose between "sehr gut" and "vorzüglich", and the less rein that is given to the enthusiasm of owners of coins (whether collectors or dealers) in their descriptions of their state of preservation the better. If Latin abbreviations could be used, it would be a gain to science. But it is hopeless to expect so much in these days of nationalist feeling, when the useful *A*, *Æ*, and *AE* have almost disappeared from all but English books.

G. F. H.

H. MATTINGLY: *Coins of the Roman Empire in the British Museum*. Vol. I. Augustus to Vitellius. pp. ccxxxi, 464, and 64 plates. London: the Trustees of the British Museum. 1923.

NUMISMATISTS and historians alike will welcome Mr. Mattingly's learned and instructive book on the early imperial coinage of Rome. The British Museum collections are so complete that any catalogue of them means an exhaustive tabulation of all types of Roman money, and, admirable and indeed indispensable in a sense as is the work of Cohen, the forty odd years which have elapsed since the publication of his second edition have made a new book on Roman coinage a necessity. It was time, too, that Mr. Grueber's catalogue of Roman republican coins in the British Museum (published in 1910) should be supplemented by the present work, which, as the "vol. i" on its cover shows, is but the first instalment of a *catalogue raisonné* of all the coins of the imperial period.

This volume indeed slightly overlaps Grueber's catalogue, beginning as it does with the coins minted in 31 B.C. The exact point at which the Republic merged into the Empire it is, of course, impossible to determine, and the selection of a *terminus a quo* for imperial coinage must therefore be an arbitrary one. Mr. Mattingly's choice of the year of the battle of Actium is probably the best that could have been made.

The book is divided into three main sections: the first is introductory and explanatory, the second consists of a descriptive list of the coins, the third of plates illustrating the most interesting and important of the coins catalogued.

In his first chapter, on the origin and development of Roman imperial coinage, Mr. Mattingly treats of the general question of mints. The mint at Rome was closed in 43 B.C., and the coins issued during the Civil War were struck both by the triumvirs and by Brutus and Cassius in their capacity of *imperatores*. The choice before the victorious Octavian lay between restoring its right of coinage to the Senate and keeping it as *imperator* in his own hands. To do the first was obviously against his own interest, to do the second without modification would have given offence. Octavian's compromise was typical of the man; he gave back, as every one knows, its right of coining copper to the Senate, retaining the minting of gold and silver. But—and this is the important point, and a point strongly emphasized and convincingly set forth by Mr. Mattingly—he exercised his right of coining gold and silver not in Rome itself but in

the provinces. The coinage of the East, for example, between 31 and 27 B.C. is coinage still issued by Octavian as a triumvir, i.e. as an *imperator*, and when in 23 B.C. Augustus began to rest his powers on the double basis of proconsular *imperium* abroad and tribunicial power at home we can see him as *imperator* minting gold and silver for the provinces, and as holder of the *tribunicia potestas* supplying, together with the Senate, Rome and Italy with copper. At first the Senate struck a few *aurei* and *denarii*, but these are not traceable later than 12 B.C., after which date Italian minted gold and silver disappears. To take its place Augustus opened the imperial mint at Lugdunum in 15 B.C. In the East a mint for silver was established at Antioch, while various local currencies were recognized. Mr. Mattingly thus sums up Augustus's final plan: "(1) to supply gold for the whole empire, and silver for the West, and to a lesser extent for the East, from Lugdunum; (2) to supplement the silver issues by Eastern issues from Antioch; (3) to let Rome and Italy draw their token money from the senatorial mint of Rome, while Gaul had its 'Altar' coins, Spain and Africa their local town issues." These same "Altar" coins were, by the way, suppressed by Augustus's successor, and Mr. Mattingly acutely suggests that Tiberius's reason for this suppression was that fear of a separatist movement in Gaul, which the Gallic revolt of A.D. 21 so signally justified. In A.D. 38 Caligula definitely closed the mint at Lugdunum and started a second mint in Rome. The same emperor seems to have pursued the policy of fostering provincial, at the expense of local, currency, especially in the West, with the result that these provinces were flooded with imitations of *aes*, accepted no doubt locally as legal tender, and very probably winked at by the government.

It is interesting to observe that the much talked of constitutionalism of Nero's early rule—the famous *quinquennium Neronis*—receives some support from numismatic evidence. We find EX-S-C (= roughly, "authorized by the Senate") not only on the *aes*, but even on the gold and silver. Apparently towards the end of A.D. 68 there was a readjustment of weights, for we find, for example, that from A.D. 64 on the *aureus* weighs on an average only 111 grammes to its former 118. Two things are to be observed here: first, that this was definitely an adjustment to current values of metals, and not a mere debasing (we may compare the recent change in English silver); the second is that this adjustment, which affected not only

gold and silver, but *aes* also, shows that in effect Nero had taken over the bronze coinage. Mr. Mattingly rejects the view that this adjustment was made to bring Roman imperial currency into line with certain recognized Eastern coinages. The "senatorial" mint opened by Nero at Lugdunum was clearly senatorial in name only, for Lugdunum was the capital of an imperial province.

The coinage of the years 68 and 69 is especially interesting from a historical point of view, and Mr. Mattingly calls attention to the use to which it was put for propaganda purposes (as it was to be again at the end of the second century, and in the disturbances of the third); he further points out that though the rivals for empire coined money at their own head-quarters, no permanent provincial mint came into being as a result of the Civil Wars.

In his second chapter Mr. Mattingly deals with the circulation of imperial coinage, adding some notes on provincial and local currencies. As he points out, there were striking differences in this matter between East and West, as well as between the three metals used for coinage. The Roman *aureus*, for example, had no rival in the West, and in the East only the gold issues of the kings of Bosphorus, while in the West Roman *aes* was never supreme until Nero's reign (the insufficiency of its supply is clearly shown by the presence of much forged *aes* in Sicily, and of coins halved and quartered in Gaul to serve as small change), and in the East it was always outrivalled by provincial and local money. Thus Rome's habit of tyrannizing over the West while respecting the culture of the East can be illustrated from coins.

The third chapter deals with Countermarks. The practice of countermarking coins, like that of surcharging stamps, springs generally from some local shortage caused by a war. In this category falls the Gallic *aes* countermarked for the payment of troops during the German wars of Augustus's and Tiberius's reigns, the coins of Caligula and Claudius countermarked for the British invasions, and, most importantly, the countermarks on the coins used in the "Four Emperor Year".

Chapter four treats of the monetary system of the empire, and its weights and measures. The changes introduced by Nero into the coinage, the reduction, that is to say, in the weight of the *aureus* whereby 45 were coined to the pound instead of 40, and of the weight of the *denarius*, of which coin 96 were now struck to the pound instead of 84, are

clearly brought out, as is also that practice of debasement of silver (the alloy of which under Nero was some 10 % to the 1 % to 2 % of earlier reigns), which was to prove financially so disastrous in following centuries. The superseding of the old bronze coinage by orichalcum for the *sestertius* and *dupondius*, and by copper for the *quadrans*, and the ousting of the *as* in favour of the *sestertius*, afford conclusive proof of a somewhat rapid rise in prices during the first half-century of the empire, and offer a feeble parallel to the present condition of German coinage.

The sixth section deals with the organization of the senatorial mint at Rome, and with that of the imperial mints of Rome and the provinces. These latter were certainly under the management of the various provincial procurators. The exact relation between the two mints at Rome, the senatorial and the imperial, is a question which has not yet been definitely settled. Mr. Mattingly believes that though they were run on similar lines they were not actually combined until the reign of Domitian—and even that he admits to be a matter of conjecture.

Sections seven to ten treat respectively of Fabric (i.e. method of striking), Epigraphy, Art, and Types and Legends. To the non-specialist the last named is the most interesting. It throws some light on the question of the use of *Imperator* as a *praenomen*, and illustrates the growing militarism of the emperor's office by calling attention to the comparative rarity of military titles, so common later, on the coins of the early part of the first century. Admirable as is Mr. Mattingly's treatment of the legends, we cannot always follow him in his interpretations. Can he really justify his translation of **PAX AVGVSTI** (as opposed to **PAX AVGVSTA** = imperial peace) as "the peaceableness of the emperor"? There is, as he says, a subtle difference between the two legends, but it is a subtler one than he makes out.

Finds, Forgeries, and Bibliography¹ form the last three sections of the first part of the introduction.

Part two consists of special introductions to the several reigns. We notice as of special interest the issue of A. D. 22-23, commemorating the assistance given by Rome to the cities of Asia which were destroyed in the earthquake of A. D. 17—a confirmation of Tacitus's words in *Ann.* ii. 47.

¹ [A detail:—Hirschfeld's *Verwaltungsbeamten* was published in 1905, not 1903, as is stated on p. lxxvi.]

Interesting, too, is the Greek countermark **KOP**, if, as Mr. Mattingly very plausibly suggests, it was indeed the stamp of the famous Corbulo. As another ingenious suggestion of the author we may cite his opinion that the reappearance of the Lyons "altar coinage" in A.D. 41 can be explained as a "birthday issue" of the Lyons-born Emperor Claudius, who became 50 on August 1 of that year. Sometimes Mr. Mattingly is almost too ingenious, as when, for example, he attributes the coinage of Macer to a mint at Carthage in Africa, relying on the likeness of these coins to those of Galba, which were "*probably* struck there". (The italics are ours.)

Most interesting of all, perhaps, is the chapter on the coinage of the Civil Wars, and the historical student of the period will find his work considerably simplified now that he has a substitute for a rather confused section in Cohen. Most worthy of remark are possibly the **SPQR** countermark stamped by Vindex on Neronian *aes*, the curious **DIVVS AVG** group of coins minted by Galba in Spain, the issues of the legions (those, for instance, of the German legions struck at Mainz), the coins of the Gallic revolt bearing the boar—the symbol of Gaul, and the curious Lyons issue of "Galba" coins minted not by Galba himself—for Lyons, as we know, was hostile to Galba, and that emperor's Gallic issues come probably from Narbo—but by Vespasian.

The volume concludes with excellent indices and admirable illustrations of about half the number of coins mentioned in the catalogue.

Fully to appreciate the detail of this book the reader must of course be a numismatist, but—and herein lies the real value of Mr. Mattingly's catalogue—the student of Roman imperial history with no more than a passing acquaintance with coins as such may derive from it the most valuable help in his researches. The two main points which strike the not specifically "numismatic" reader are, first, the doctrine that between the years 15 B.C. and A.D. 38 the money minted by the Emperor in his imperial mint was struck not in Rome but at Lugdunum, and, secondly, the stress which Mr. Mattingly lays on the importance of coins as possible historical evidence. The first of these two points is relatively speaking new. De Salis had emphasized the importance of provincial mints and articles by Mr. Sydenham, M. Mowat, and Signor Gabrici in the numismatic periodicals of their respective countries had laid the foundation of the theory, but, as Mr. Mattingly pointed out in an article

which he contributed to the *Journal of Roman Studies* (1917), even so recent a scholar as Mommsen "never even entertained a doubt that the main imperial mint was from the first in Rome". It must be admitted that the author seems to prove his thesis most conclusively; indeed, in the face of Strabo's express statement that the emperors coined their gold and silver in Lugdunum (and Strabo wrote under Tiberius), it is hard to believe that any other view could have been held. We know further from inscriptions that the 18th urban cohort which was stationed at Lugdunum was connected with the mint, and we have the tomb of an *aequator monetarum* who died in that city during the reign of Tiberius (Boissieu, *Inscr. de Lyon*, p. 280). Arguments from negative instances are dangerous, but it is remarkable that we possess no inscriptions relative to mint officials in Rome which can with any certainty be attributed to the early empire. Perhaps the only instance is *C.I.L.* vi. 8461 ("C. Iulio Thallo . . . superposito auri monetarum numulariorum"), and even in this case we cannot be sure of the exact date unless we can equate this Thallus with the freedman of Tiberius mentioned by Josephus (*de antiq. Iud.* xviii. 6. 4)—a temerarious equation, for the text is corrupt in that passage.

The importance of coins as historical evidence has of course long been recognized, but until the appearance of this book we had, passing over Cohen, who was no historian, to go back to Eckhel to find any work which would at once satisfy the numismatist by its wealth of detail, and the historian by its conclusions based on that detail. Mr. Mattingly's opening sentence strikes the keynote of his book: "The question of the origin of the imperial coinage is really only a fraction of the larger question of the development of the Roman Empire out of the Roman Republic." Divorced from historical associations the study of Roman coins is a fascinating hobby—but no more than a hobby. Treated as Mr. Mattingly treats it, it is a most valuable sidelight on history. We hope that Mr. Mattingly will one day follow the lead of Dr. G. F. Hill in his *Historical Roman Coins*, and give us a more popular, or at least a less specialized, book or series of articles on that theme. We cull one suggestion from his own pages: "Coins as propaganda."

M. PLATNAUER.

The Bronze Coinage of the Late Roman Empire, by HUGH GOODACRE, F.R.N.S. Reprinted from the *Numismatic Circular*, 1921-22. London, 1922.

THIS useful little book aims at presenting to the student or collector in convenient form a survey of the bronze coinage of the Empire from Constantine the Great to Romulus Augustulus, including that of the East from Arcadius to Zeno. As the author explains in his almost too modest preface, he does not aim at originality, but only at selection and compilation. Taking into account these self-imposed limitations, we may congratulate him on a very successful and serviceable piece of work. His short historical introductions to the individual reigns will be found to contain most of the facts required for an appreciation of the types. The general introduction offers some useful notes on mint-marks, legends, &c.: we can hardly blame Mr. Goodacre for failing to present a satisfactory account of the denominations, as the whole subject is still involved in confusion. But system there must have been, however hard we find it to detect it. Perhaps the best part of the book is the clear and frank discussion of the "Nobilissima Femina" controversy: there is much to be said for Mr. Goodacre's conclusion—that the coins belong to Helena, the mother, and Fausta, the wife of Constantine I, but are not contemporary issues. The general plan of the book hardly requires an elaborate index. But this does not excuse its entire absence: nor is it any consolation to find the Table of Contents labelled "Index" and placed at the end of the volume.

H. M.

Coins and Chronology of the Early Independent Sultans of Bengal. By NALINI KANTA BHATTASALI. Cambridge, 1922. 184 pp. 10 Plates. 12s. 6d.

THE Curator of the Dacca Museum is to be congratulated on this valuable monograph. It is based on the study of a find of some 350 fourteenth-century coins of Bengal, and does much to correct and increase our knowledge of a very confused period. The coins of the Sultans of Bengal offer more epigraphical difficulties than any other Muslim series. The script is rude and corrupt, the important marginal legends are usually fragmentary, and the coins are defaced by shroff-marks to an extent quite unknown elsewhere. The scantiness of our historical sources gives the coins with their dates and mints an importance they do not possess in the Moghul series, for example. Previous writers on the

series, such as Thomas on the Kooch Behar find, Nevill on the Kulna hoard, have given from the specimens at their disposal readings which Mr. Bhattasali's elaborate examination of coins in Calcutta, Dacca, and Shillong Museums, with the addition of those in the present hoard, now show to be untenable. The result is to clear up many puzzles and to illuminate many obscure points on the history of Bengal from the reign of Ghiyas al-Din Mubarak to that of Jalal al-Din Muhammad. We are glad to see it is still possible in India to produce a handsome little volume dealing with obscure topics, which cannot hope to have a wide appeal.

J. A.

Japanische Bildermünzen. By Dr. A. FONAHN. Leipzig, Hiersemann, 1923. 19 pp. 23 Plates. 8s.

THE Japanese *E* or picture sen are not coins, but amulets, medalets, and tokens of the kind issued for collectors rather than as currency in England at the end of the eighteenth century. The standard Japanese book on the subject gives over 1,000 varieties. Their origin is no doubt to be traced to the amulets of China, but in character they are essentially Japanese. Very few have the magic element which is the common feature of Chinese amulets. Among the common types are Daikoku with his hammer and wallet, in a variety of activities, Ebisu, the complete angler of the Japanese celestial heptarchy, with specimens of his skill, the fox-messengers of Inari Sama, Shogo filling his cup with sake, &c., &c. A well-known group bears Buddhist legends. Many have been made in government mints to celebrate special occasions such as the beginning of a new coinage; others are made privately for family celebrations or the festival of some deity. Many of the larger pieces are very fine specimens of casting.

Dr. Fonahn has described and illustrated some 200 specimens in a handsome volume. The legends are given in Japanese, in Roman transliteration, and in a German translation; brief explanatory notes are added explaining allusions, and giving details of the various deities, animals, and objects depicted on the pieces. Dr. Fonahn has given us a book which will be of great value for the study of a series which does not receive the attention its fascinating variety deserves. An introduction giving a brief account of the origin and uses of the pieces would have added to the value of the book.

J. A.

OBITUARY.

SIR HENRY HOWORTH.

It is usual in our Society to defer the melancholy task of paying a tribute to deceased members until we meet for our annual survey of the events of the session in the month of June. But the loss which we have suffered by the death of our Vice-President, Sir Henry Howorth, is such a serious one, that I think it my duty to speak a few words in his honour before the accustomed time.

He was one of our oldest surviving members, having been elected so far back as 1878, and he occupied our presidential chair from 1908 to 1913, after which he became one of the Vice-Presidents, and retained that office till the day of his death. He was a very frequent, I might almost say a regular, attendant at our meetings, till failing health disabled him in 1922. And, whenever a president was not forthcoming, he presided over the assembly with his accustomed urbanity and ready flow of wit and anecdote. He was, I think I may say, the readiest and most fluent of commentators on papers of every kind and every subject, and his observations were always suggestive and apposite. For twenty years or more, down to about 1910, he was a contributor to the pages of the *Numismatic Chronicle* on the largest scale, and the text of his papers is a sufficient testimony to the wideness of his interests and the diversity of his knowledge. While the majority of them dealt with Oriental subjects, a very fair number were concerned with purely Greek numismatics, and he occasionally diverged into Anglo-Saxon problems: I have a special memory of a most interesting paper on Ecgbert of Wessex and his relations to the coinage of Kent.

This diversity of numismatic interests was a typical example of Sir Henry Howorth's wide-spread mental activities in all quarters of human knowledge. For most men it would have been enough to master the intricacies of a number of branches of numismatics. But numismatics were only one, and perhaps not the most engrossing, of Howorth's lines of inquiry. His eager mind ranged over

all history and archaeology, from prehistoric days down to the times of the Great War. It is astounding to find that the same man wrote a solid book on the Mammoth, three volumes on Early Anglo-Saxon Church History, and four on the History of the Mongols! For these last I must pay him a tribute of personal gratitude, for if they had not existed I should, as a student of East European history, have been utterly unable to follow out the ramifications of the minor Tartar kingdoms of the later Middle Ages—on which no other book than his is accessible in English.

The words that I have hitherto spoken sound like the eulogy of an archaeologist and historian—it is surprising to find that Sir Henry was not only a man of the past, but pre-eminently a man of modern English political life. He was a keen Conservative member of parliament, and for many years sat as member for one of the divisions of Salford—a most difficult seat to win or to retain. I have heard him tell the most whimsical tales of his constituents, their merits, and their foibles. He was a most popular person in the House of Commons, and the life and centre of the dining-room and the smoking-room, where his well-known talents as a *raconteur* had full scope. Oddly enough, I met him—thirty years ago or more—first in his political capacity, and it was not till I had some acquaintance with him that I realized that this active man from Westminster was the same person as the author of the enormous History of the Mongols—a work large enough to have absorbed the energies of an ordinary man for a whole lifetime.

Versatility, universal interest in all problems human and divine, and a portentous power of rapid work and lucid composition were his distinguishing characteristics. These might have combined to make no more than a polymath, a heavy encyclopaedia of knowledge. But, by way of exception from common human frailty, Howorth united to them a strong sense of humour, and an inexhaustible fund of good fellowship. To make his acquaintance was to become his admirer. Every one who remembers his frequent visits to our own meetings will agree that he diffused about him a perfect atmosphere of geniality.

There is what I consider a tiresome tendency in these recent years to preach specialization in knowledge, and to advise every man to keep to one branch of science, and perhaps even to one section of that one branch. The result of this system, when pressed to extreme, is that men have too few common interests, and lose their power of rejoicing

in each other's work. I hope that I may never get so engrossed in numismatic problems that I cease to take an interest in Roman inscriptions, or Florentine primitive painters, or Chelsea china. Howorth was a living protest against over-specialization—his interests were broad enough to make it possible for him to take a lively part in any possible discussion that might turn up, at the Asiatic Society or the Royal Historical Society, no less than at our own meetings. He was a man to be envied, and, I feel sure, a man to be imitated, so far as our lesser powers permit. For over-specialization is the begetter of dullness, and dullness makes learning intolerable, and if learning becomes intolerable, what is to be the future of the generations that are to come?

C. O.

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I.



II.



III α



III β



III γ



IV.





V α



34 b



V β



39



37



VI



40



43



50



VII α



45



54



53



VII β



62



58



63



VII γ



64

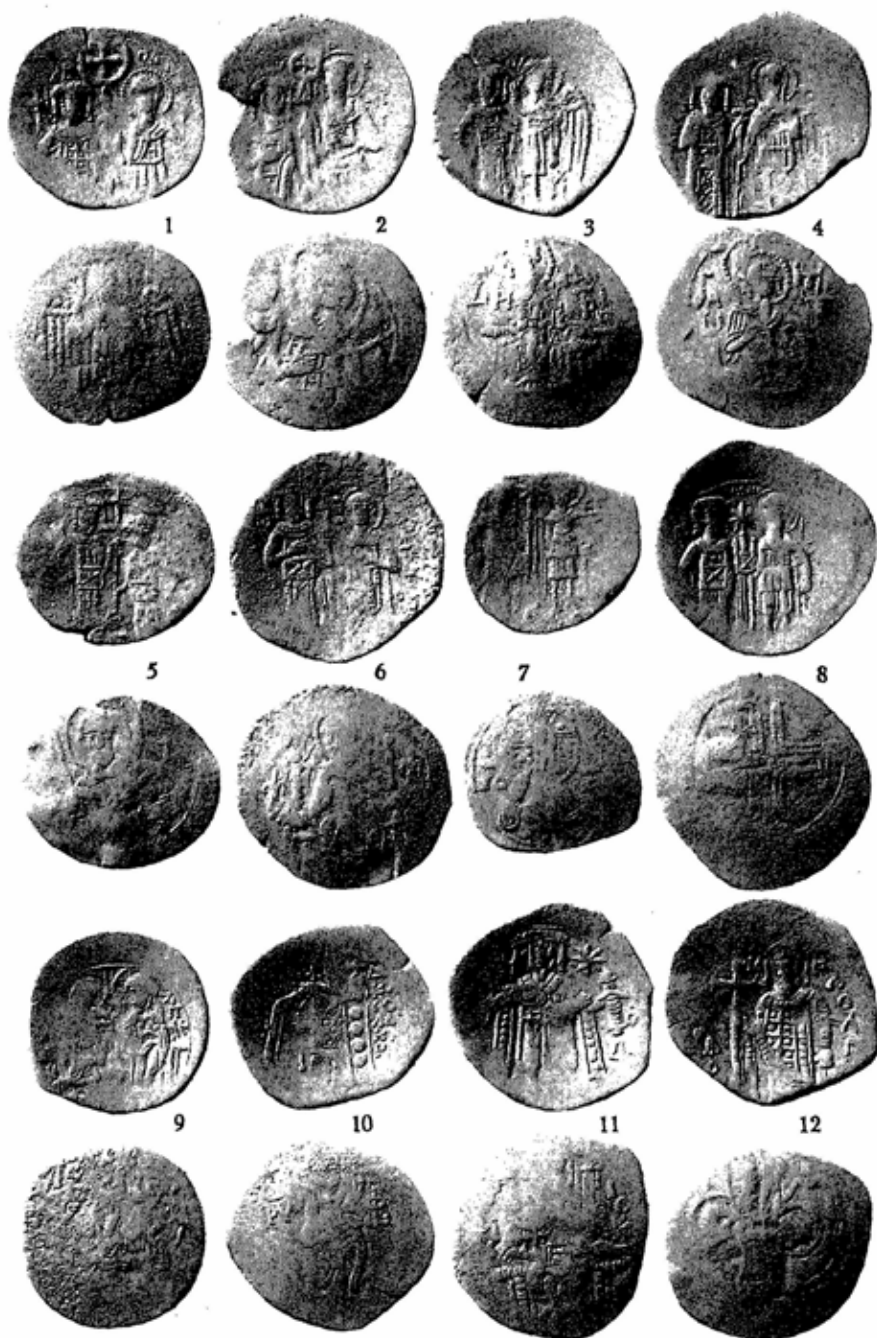


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66







1-8 LATIN EAST; 9 ENGLISH; 10 SYRACUSE; 11-16 STERLINGS.





2



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13



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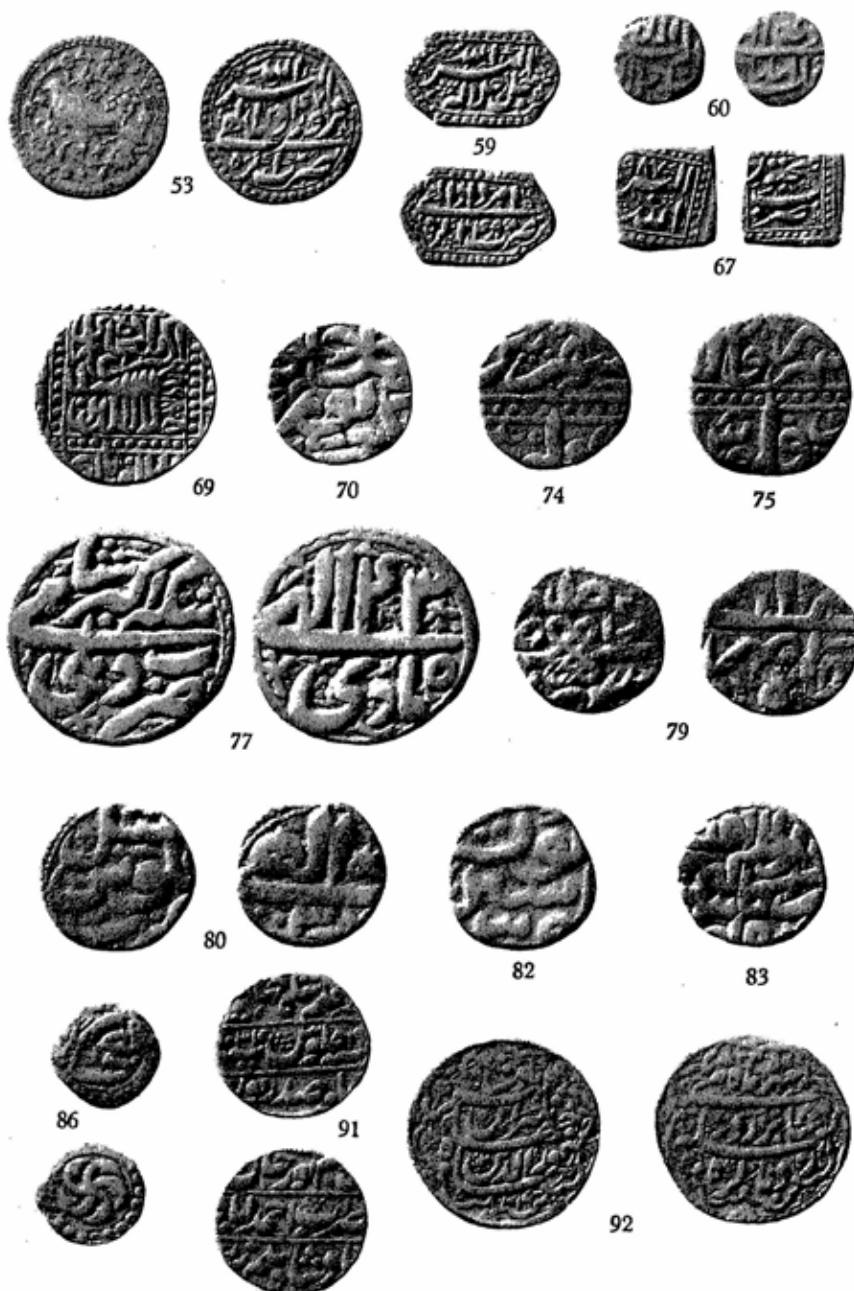


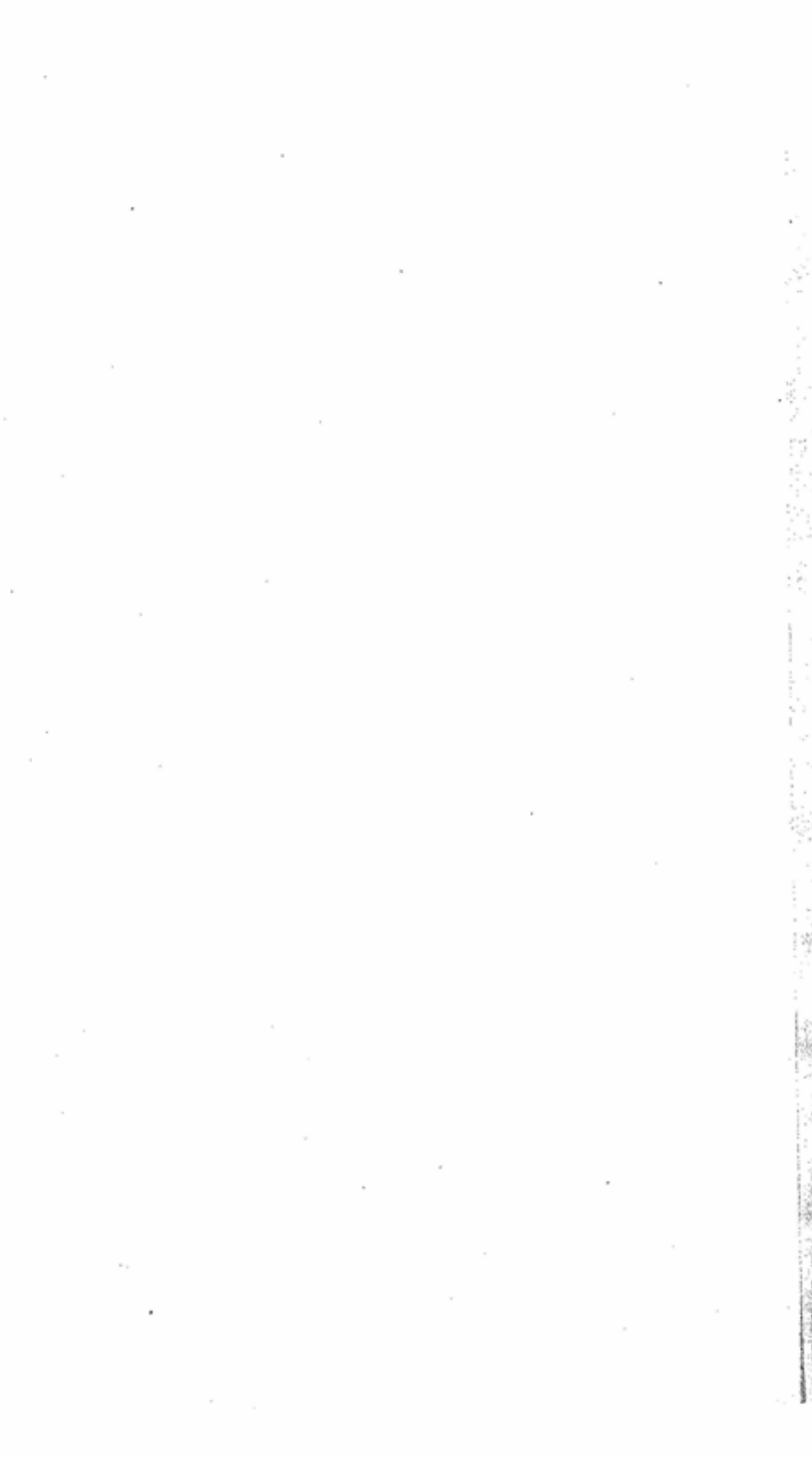
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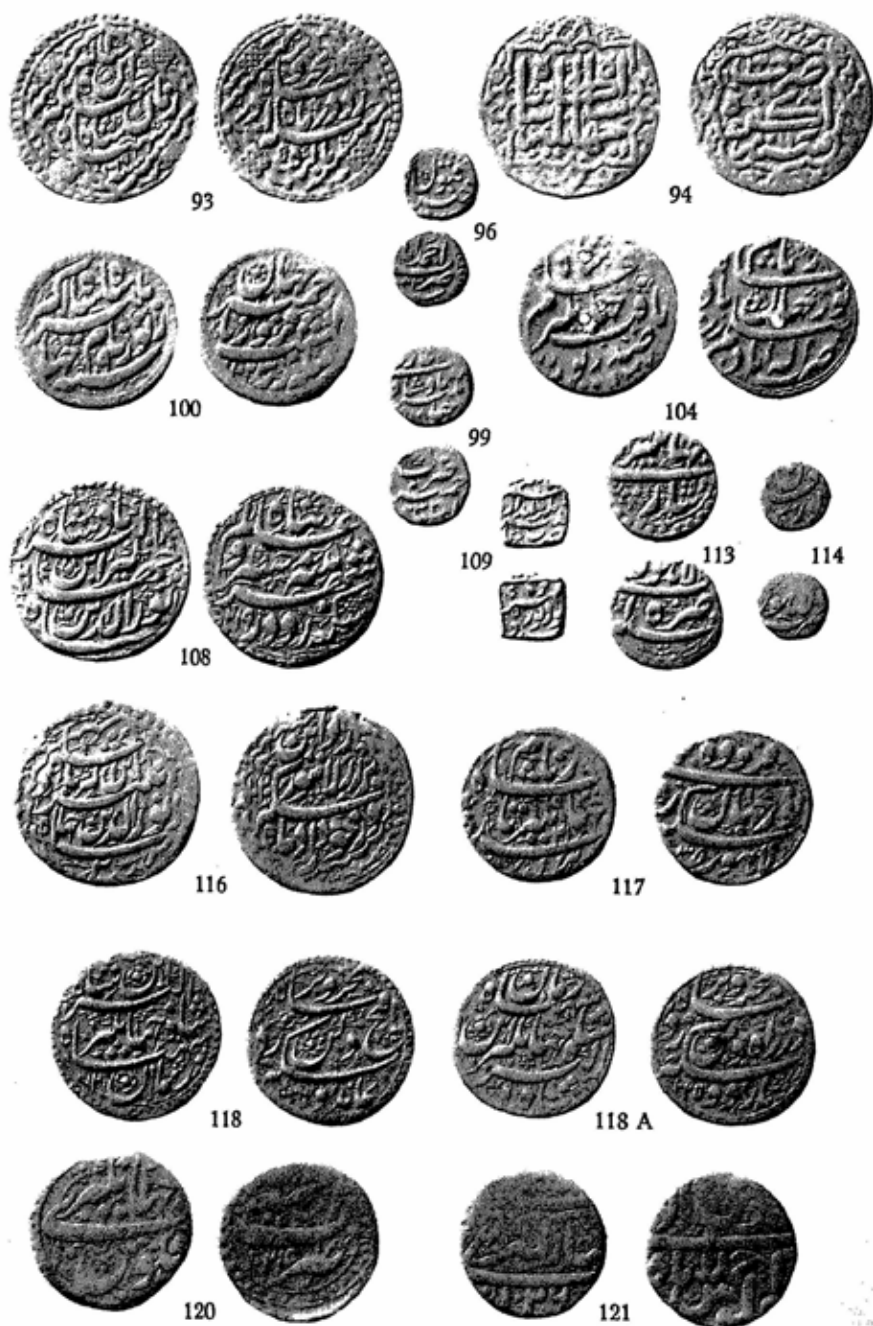


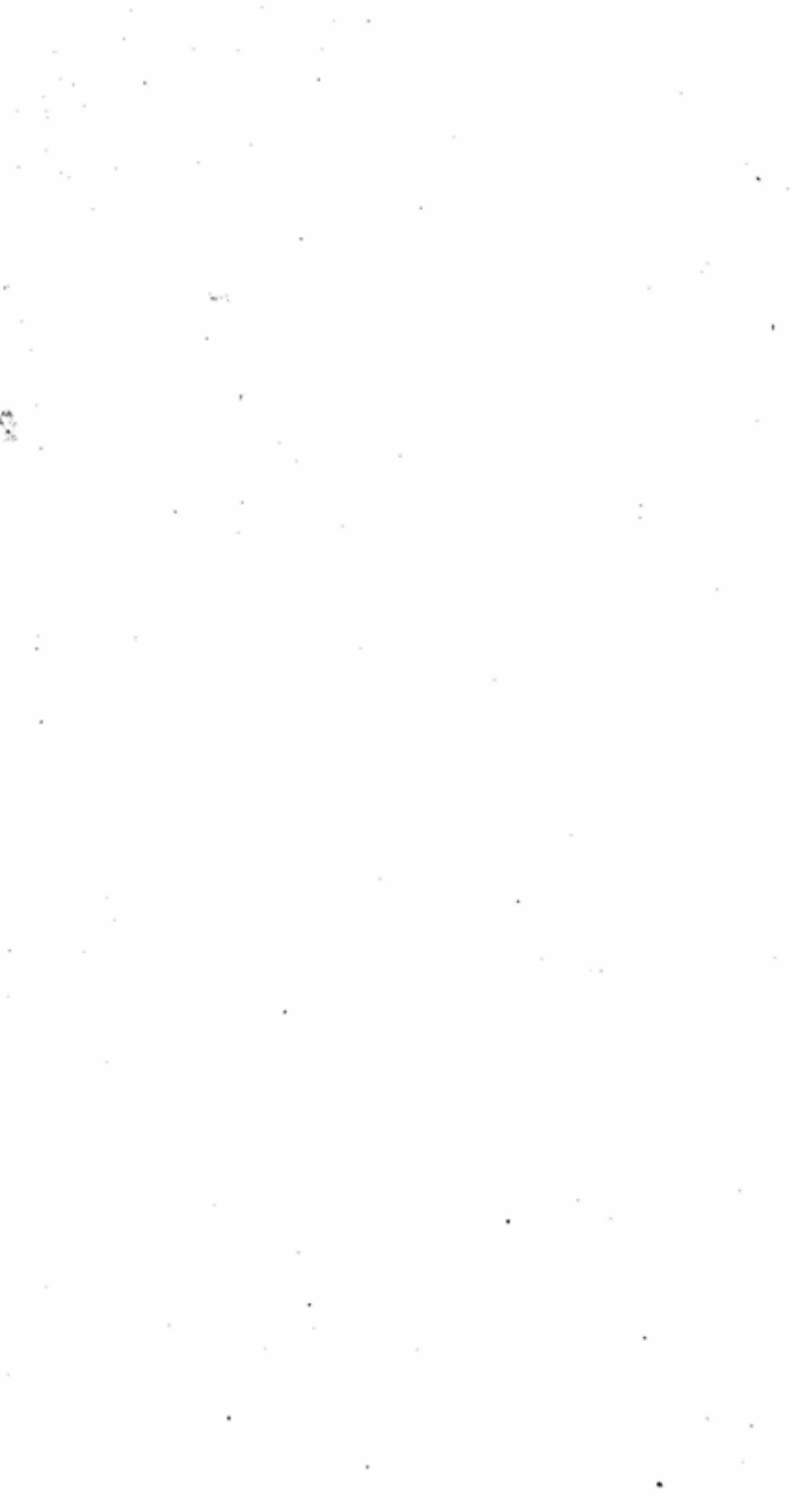
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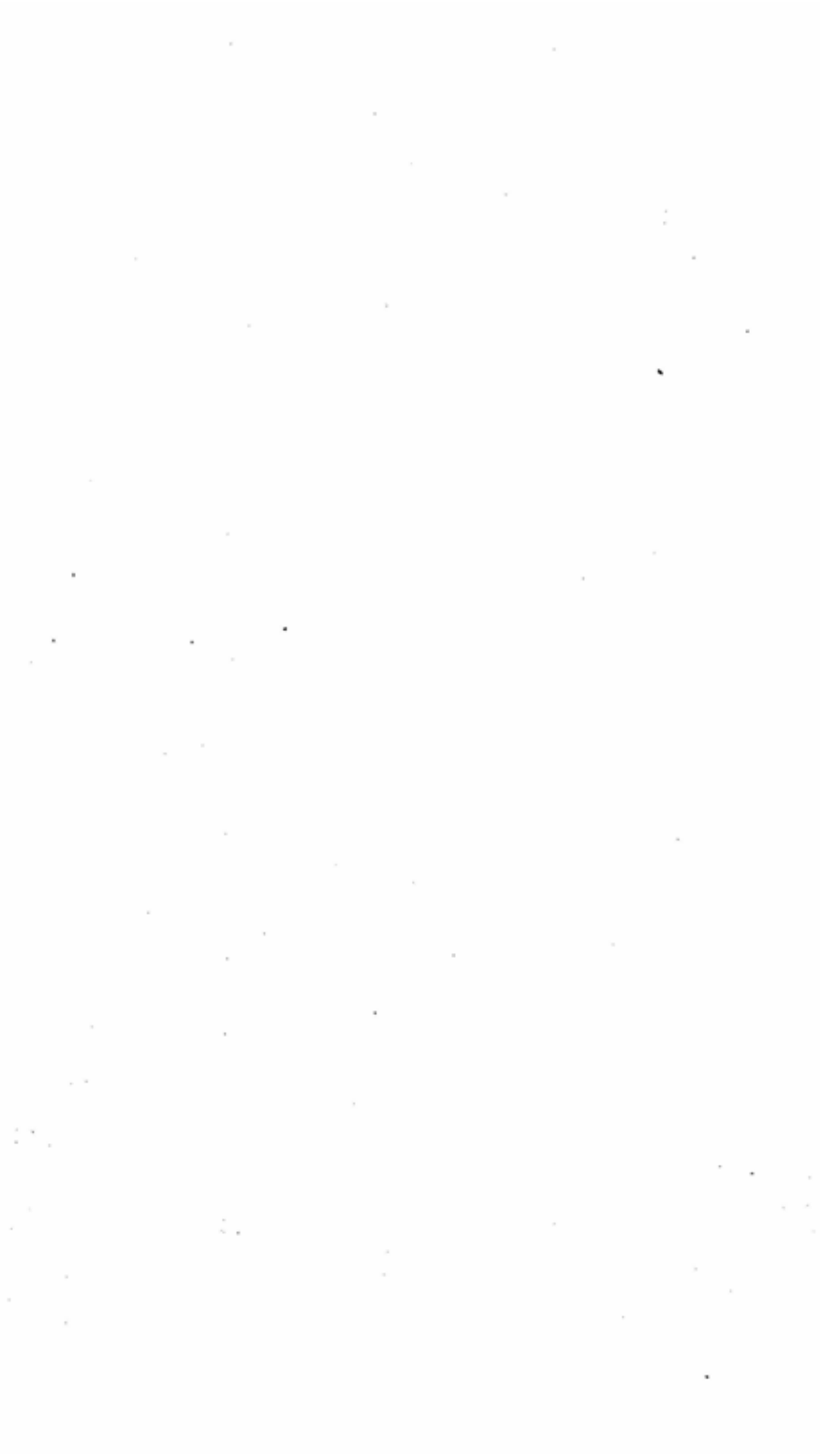






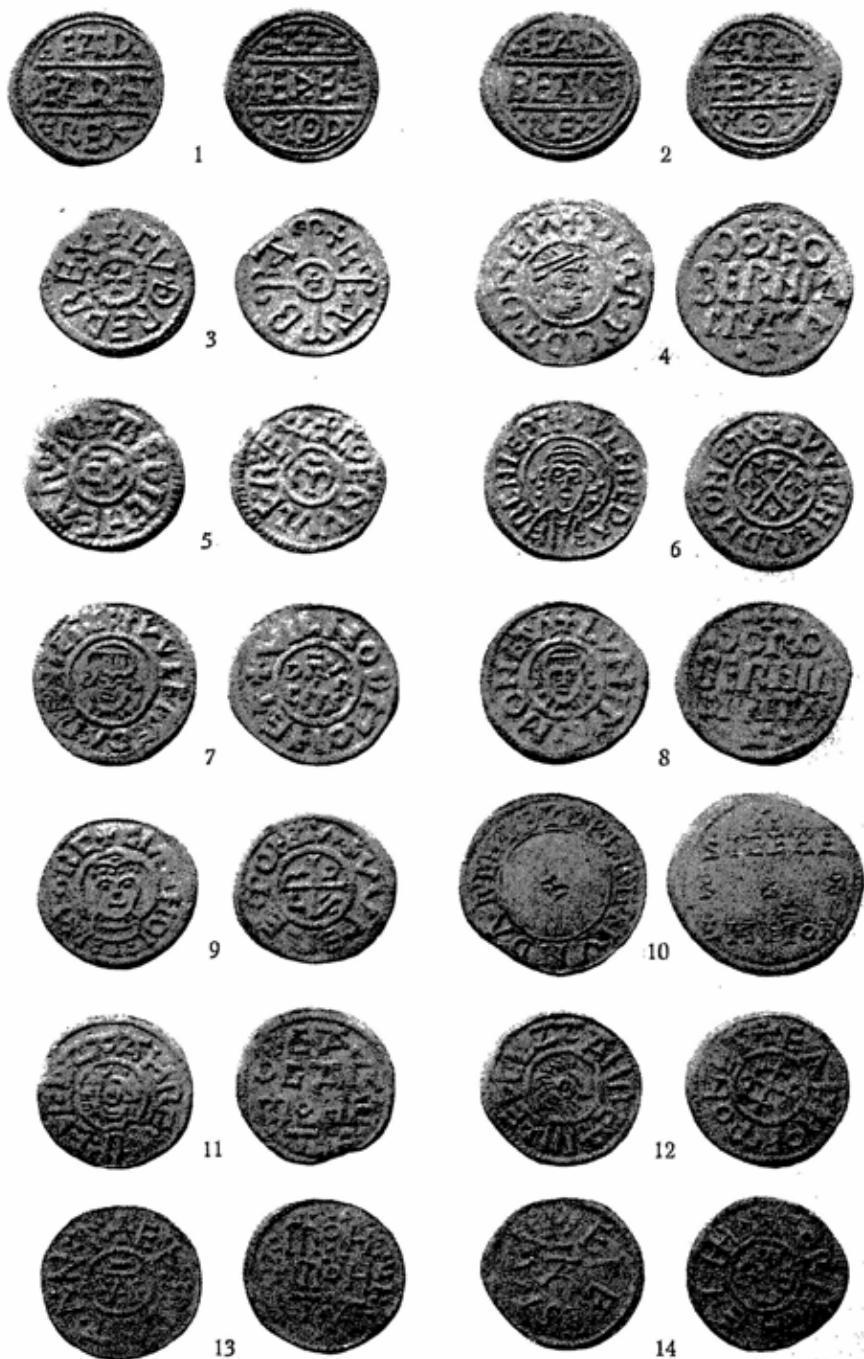


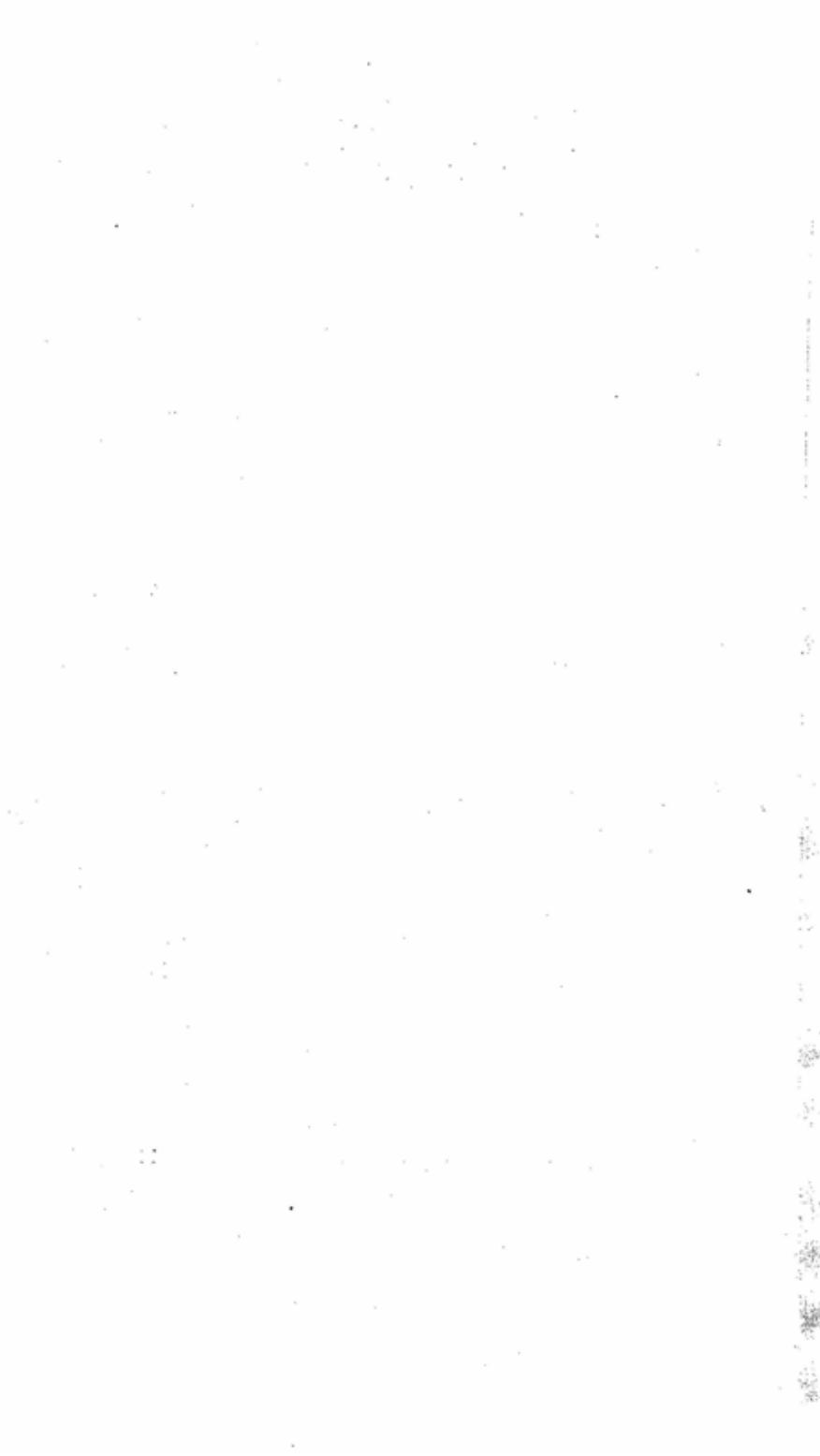






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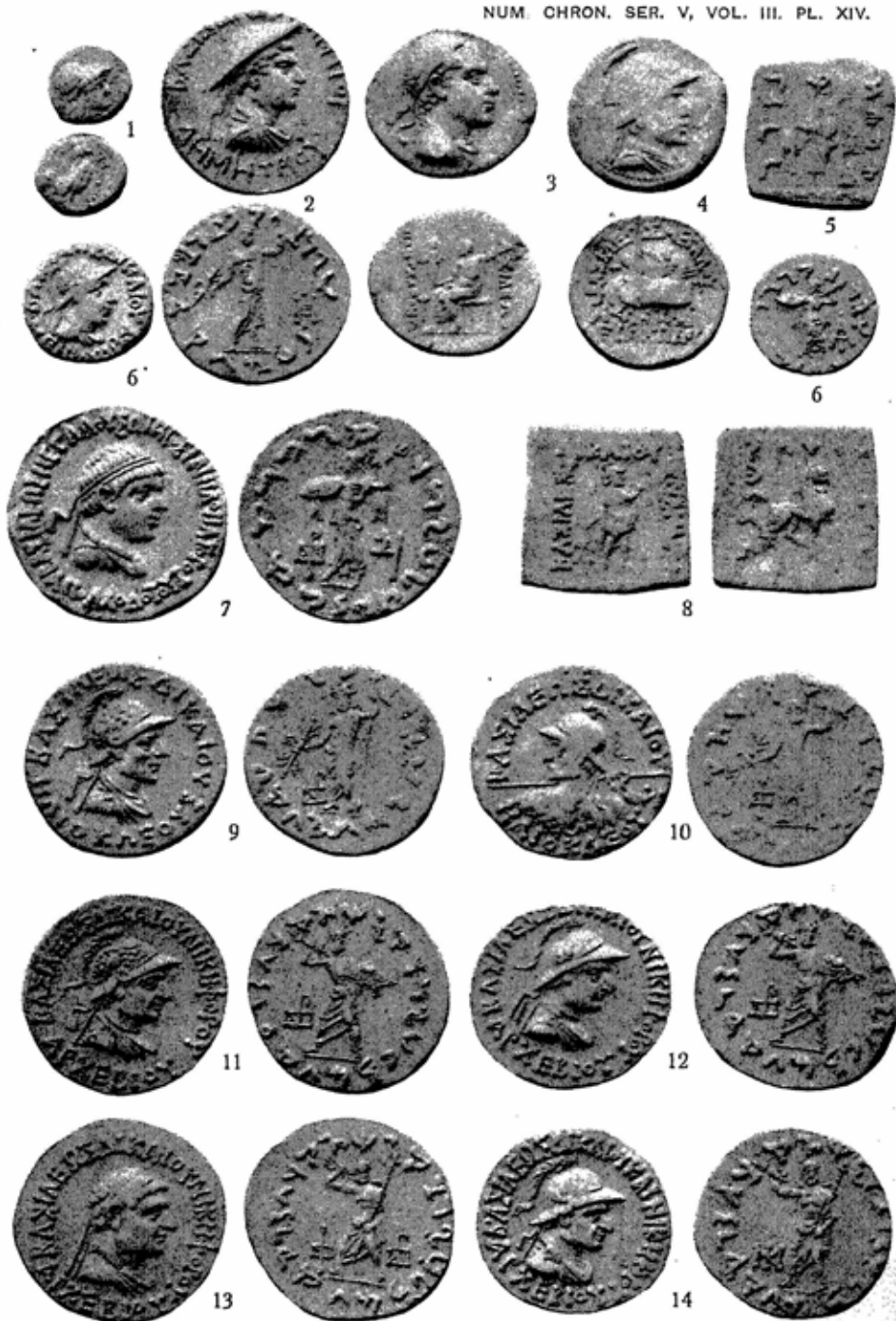


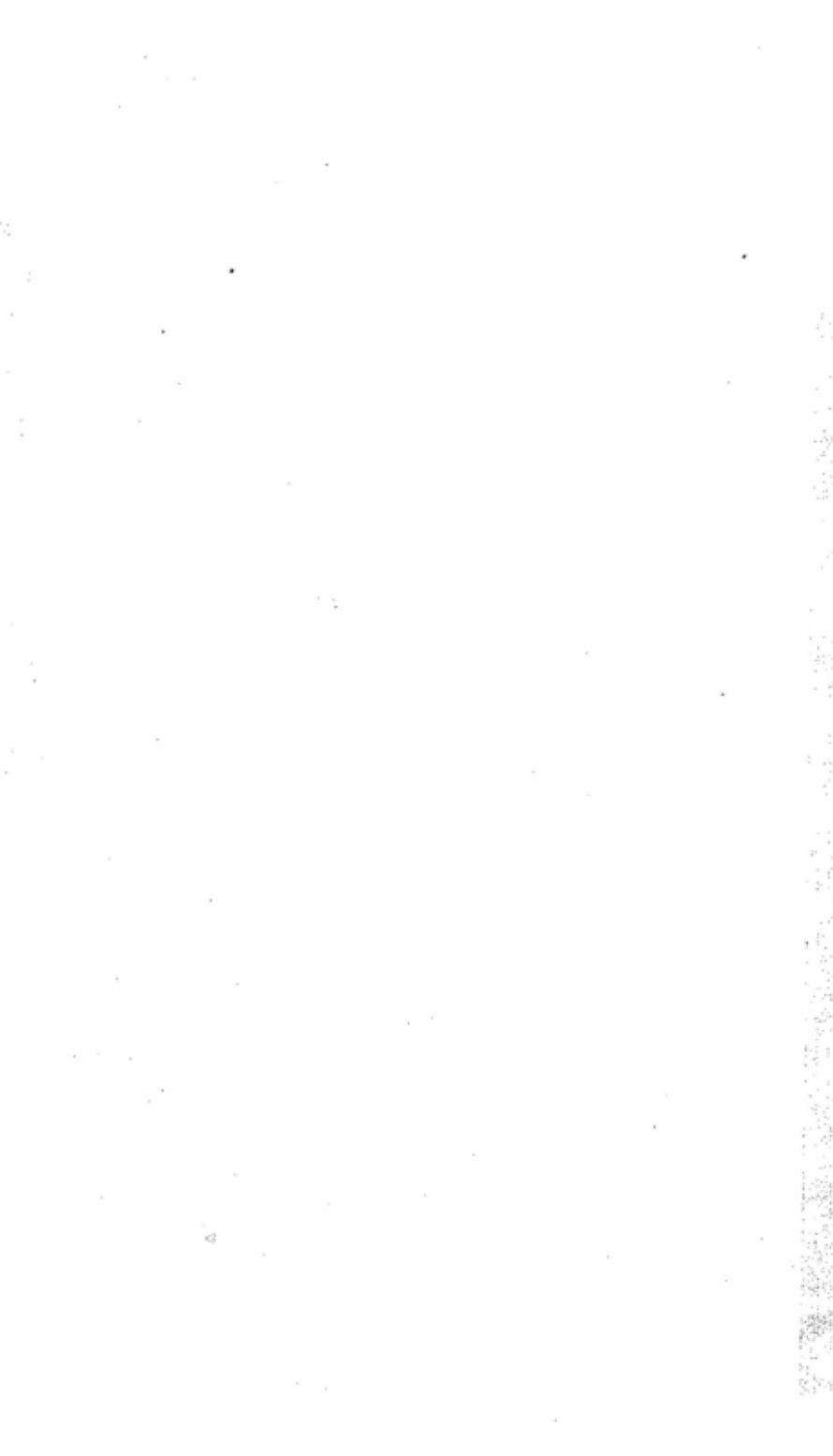
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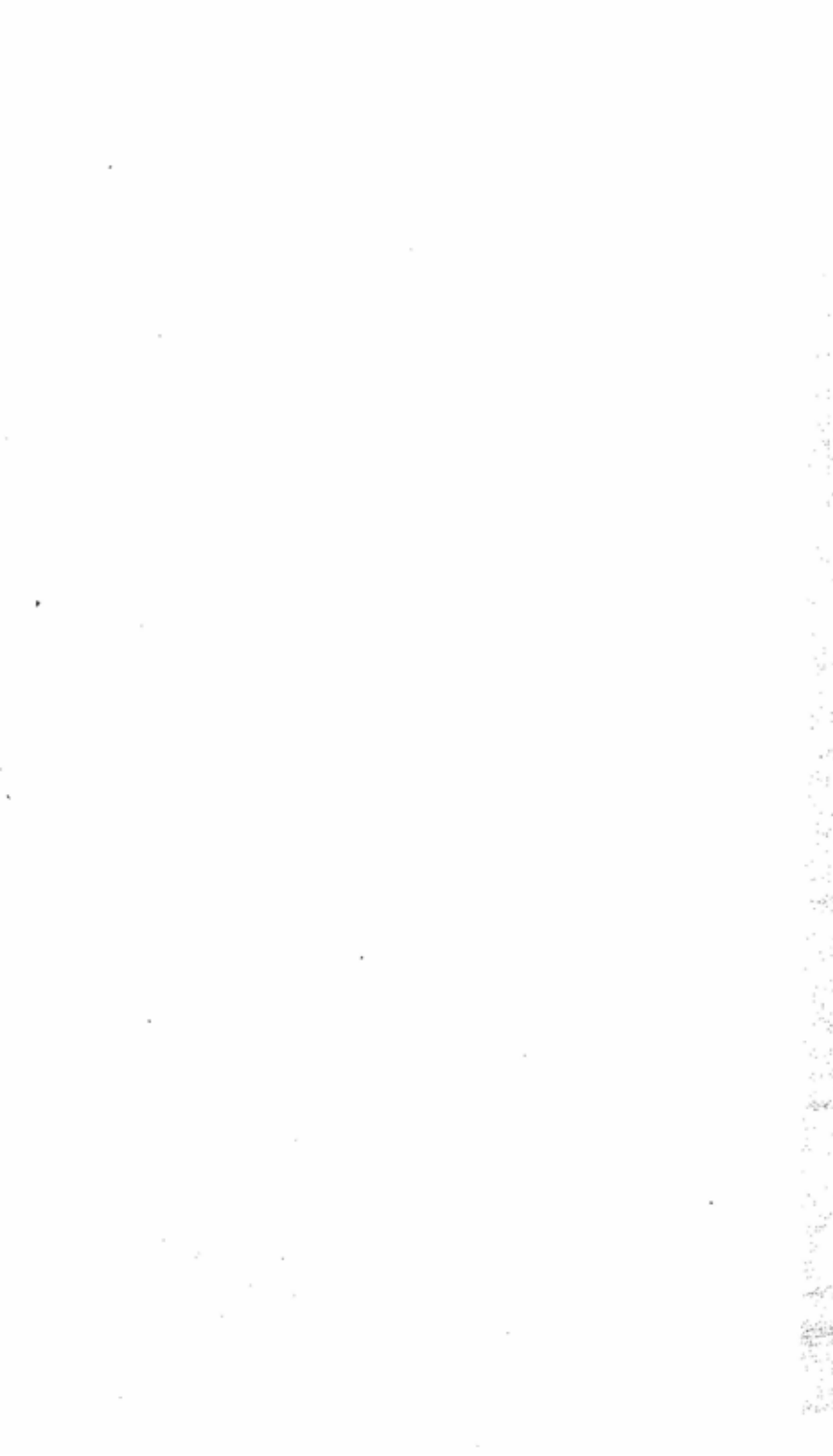


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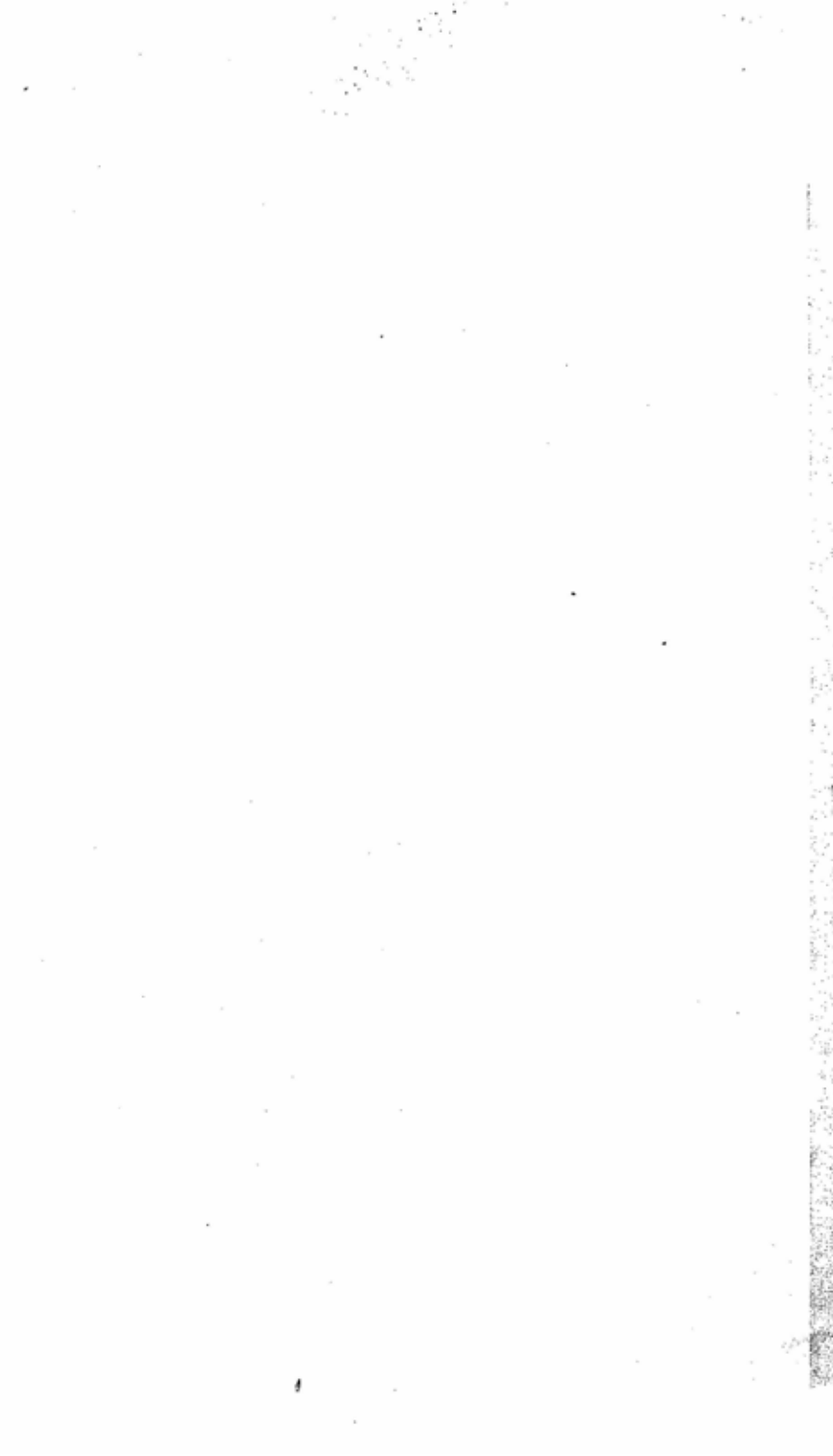
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1921 FAULKNER, W. J., Esq., Sutton House, Endon, Stoke-on-Trent.

1902 FENTIMAN, HARRY, Esq., Murray House, Murray Road, Ealing Park, W. 5.

1914 FIALA, Regierungsrat Eduard, Palais Cumberland, Vienna.

1910 FISHER LIBRARY, THE, University, Sydney, N.S.W.

1908 FITZWILLIAM MUSEUM, The Curator, Cambridge.

1901 FLETCHER, LIONEL LAWFORD, Esq., Norwood Lodge, Tupwood, Caterham.

1915 FLORENCE, R. Museo Archeologico of, Italy.

1898 FORRER, L., Esq., 11 Hammelton Road, Bromley, Kent.

1912 †FORSTER, R. H., Esq., M.A., LL.B., F.S.A., Kilmar House, Liskeard, Cornwall.

1894 *FOSTER, JOHN ARMSTRONG, Esq., F.Z.S., Chestwood, near Barnstaple.

1905 FREY, ALBERT R., Esq., New York Numismatic Club, P.O. Box 1875, New York City, U.S.A.

1896 *FRY, CLAUDE BASIL, Esq., Hannington Hall, Highworth, Wilts.

1897 *GANS, LEOPOLD, Esq., 207 Maddison Street, Chicago, U.S.A.

1912 GANTZ, REV. W. L., South Place, Letchworth.

1871 GARDNER, PROF. PERCY, M.A., D.Litt., Litt.D., LL.D., F.S.A., F.B.A., 12 Canterbury Road, Oxford.

1907 GARDNER, WILLOUGHBY, Esq., F.S.A., F.R.G.S., F.L.S., Y Berlfa, Deganwy, North Wales.

1889 GARSIDE, HENRY, Esq., 46 Queen's Road, Teddington, Middlesex.

1920 GIFFORD, C. S., Esq., 36 Temple Place, Boston, U.S.A.

1913 GILBERT, WILLIAM, Esq., M.S.A., 74 Broad Street Avenue, E.C. 2.

1916 GILLIES, WILLIAM, Esq., 204 West George Street, Glasgow.

1922 GILLINGHAM, HARROLD E., Esq., 482 West Price St., Philadelphia, U.S.A.

1920 GINORI, MARCHESE ROBERTO VENTURI, 75 Via della Scala, Florence, Italy.

ELECTED

- 1906 GLOUCESTER, THE RIGHT REV. THE BISHOP OF, The Palace, Gloucester.
- 1894 GOODACRE, HUGH, Esq., Ullesthorpe Court, Lutterworth, Leicestershire.
- 1904 GRAHAM, T. HENRY BOILEAU, Esq., Oxford and Cambridge Club, Pall Mall, S.W. 1.
- 1905 GRANT DUFF, SIR EVELYN, K.C.M.G., 14 Marlborough Buildings, Bath.
- 1891 *GRANTLEY, LORD, D.L., J.P., F.S.A., Weekes Manor, Winchester, Hants.
- 1914 GROSE, S. W., Esq., M.A., 18 Hobson Street, Cambridge.
- 1871 GRUEBER, HERBERT A., Esq., F.S.A., Bembridge, Isle of Wight.
- 1910 GUNN, WILLIAM, Esq., 19 Swan Road, Harrogate.
- 1920 GUNTHER, CHARLES GODFREY, Esq., Nicosia, Cyprus.
- 1916 HAINES, G. C., Esq., 14 Gwendwr Road, W. 14.
- 1899 HALL, HENRY PLATT, Esq., Toravon, Werneth, Oldham.
- 1912 HAMILTON-SMITH, G., Esq., Northside, Leigh Woods, Bristol.
- 1898 HANDS, REV. ALFRED W., The Rectory, Nevendon, Wickford, Essex.
- 1912 HARDING, NEWTON H., Esq., 110 Pine Avenue, Chicago, U.S.A.
- 1917 HARRIS, B. WILFRED, Esq., Lynwood, Boldmere, Erdington, Birmingham.
- 1904 HARRIS, EDWARD BOSWORTH, Esq., 5 Sussex Place, N.W. 1.
- 1904 HARRISON, FREDERICK A., Esq., F.Z.S., Sunnyside, Fourth Avenue, Frinton-on-Sea.
- 1916 *HART, R. EDWARD, Esq., M.A., Brooklands, Blackburn.
- 1914 HAYES, HERBERT E. E., Esq., M.R.A.S., C.M.S. House, Menouf, Egypt.
- 1920 HEMING, RICHARD, Esq., Westdean, Leckhampton Road, Cheltenham.
- 1886 *HENDERSON, JAMES STEWART, Esq., F.R.G.S., M.R.S.L., M.C.P., 1 Pond Street, Hampstead, N.W. 3.
- 1900 HEWLETT, LIONEL M., Esq., Greenbank, Harrow-on-the-Hill, Middlesex.
- 1908 HIGGINS, FRANK C., Esq., 579 East 17th Street, Flatbush, Brooklyn, N.Y.
- 1898 HILL, CHARLES WILSON, Esq. (address not known).
- 1893 HILL, GEORGE FRANCIS, Esq., M.A., LL.D., Litt.D., F.B.A., *Keeper of Coins*, British Museum, W.C. 1, *Vice-President*.
- 1898 HOCKING, WILLIAM JOHN, Esq., C.B.E., Royal Mint, E. 1.
- 1895 HODGE, THOMAS, Esq., Fyning House, Rogate, Petersfield, Hants.

ELECTED

- 1920 *HOLROYD, MICHAEL, Esq., Brasenose College, Oxford.
- 1878 †HOWORTH, SIR HENRY H., K.C.I.E., D.C.L., F.R.S., F.S.A.,
45 Lexham Gardens, W. 8.
- 1921 HUBBARD, MAJOR T.O'BRIEN, H. Q., Palestine Wing, R.A.F.,
Birsalem, Palestine.
- 1883 †HUBBARD, WALTER R., Esq., 6 Broomhill Avenue, Partick,
Glasgow.
- 1885 HÜGEL, BARON F. VON, D.D., 13 Vicarage Gate, W. 8.
- 1908 *HUNTINGTON, ARCHER M., Esq., Governor of the
American Numismatic Society, Audubon Park, 156th
Street, West of Broadway, New York, U.S.A.
- 1911 HYMAN, COLEMAN P., Esq., Royal Colonial Institute,
Northumberland Avenue, W.C. 2.
- 1922 IYENGAR, M. H. KRISHNA, Esq., M.A., M.R.A.S., Government
Museum, Bangalore, India.
- 1922 JAMESON, M. R., 8 Avenue Velasquez, Paris.
- 1922 JOHNSON, LIEUT.-COL. ROBERT A., C.B.E., Deputy-Master,
The Royal Mint, E. 1.
- 1911 JOHNSTON, LEONARD P., Esq., The Cottage, Warningcamp,
Arundel, Sussex.
- 1911 JONES, FREDERICK WILLIAM, Esq., 22 Ramshill Road,
Scarborough.
- 1874 *KENYON, R. LLOYD, Esq., M.A., J.P., D.L., Pradoc, West
Felton, Salop.
- 1914 *KERR, ROBERT, Esq., M.A., Royal Scottish Museum,
Edinburgh.
- 1920 KING, COLONEL E. J., C.M.G., The Old House, East Finchley,
N. 2.
- 1901 KOZMINSKY, DR. ISIDORE, 20 Queen Street, Kew, near
Melbourne, Victoria.
- 1917 LAMB, MISS WINIFRED, Holly Lodge, Campden Hill, W. 8.
- 1920 LAST, H. M., Esq., St. John's College, Oxford.
- 1910 LAUGHLIN, DR. W. A., M.A. (address not known).
- 1877 LAWRENCE, F. G., Esq., Birchfield, Mulgrave Road, Sutton,
Surrey.
- 1885 *LAWRENCE, L. A., Esq., F.S.A., 44 Belsize Square, N.W. 3.,
Librarian.
- 1883 *LAWRENCE, RICHARD HOE, Esq., Fifth Avenue Bank, New
York, U.S.A.

ELECTED

- 1918 LEVIS, HOWARD COPPUCK, Esq., F.S.A., 40 Egerton Gardens, S.W. 8.
- 1920 LEWIS, JOHN CAMPBELL, Esq., Rhun Cottage, Glantaff Road, Troedyrhiw, Merthyr Tydfil.
- 1900 LINCOLN, FREDERICK W., Esq., 69 New Oxford Street, W.C. 1.
- 1922 LLOYD, ALBERT H., Esq., 78 Grange Road, Cambridge.
- 1922 *LLOYD, MISS MURIEL ELEANOR HAYDON, 73 Grange Road, Cambridge.
- 1907 LOCKETT, RICHARD CYRIL, Esq., F.S.A., J.P., 58 Cadogan Place, S.W. 1.
- 1911 LONGMAN, W., Esq., 27 Norfolk Square, W. 2.
- 1921 LUCKNOW MUSEUM, The Curator of the, Lucknow, India.
- 1898 LUND, H. M., Esq., Waitara, Taranaki, New Zealand.
- 1903 LYDDON, FREDERICK STICKLAND, Esq., 5 Beaufort Road, Clifton, Bristol.
- 1885 *LYELL, ARTHUR HENRY, Esq., F.S.A., 9 Cranley Gardens, S.W. 7.
- 1895 MACDONALD, GEORGE, Esq., C.B., M.A., LL.D., D.Litt., F.B.A., 17 Learmonth Gardens, Edinburgh.
- 1901 MACFADYEN, FRANK E., Esq., 135 Osborne Road, Newcastle-on-Tyne.
- 1923 MALLINSON, ARNOLD, Esq., St. Stephen's House, Oxford.
- 1917 MARNÓ, CAPT. C. L. V., 11 Sloane Avenue, S.W. 3.
- 1897 MASSY, COL. W. J., 30 Brandenburgh Road, Chiswick, W. 4.
- 1912 MATTINGLY, HAROLD, Esq., M.A., British Museum, W.C. 1.
- 1905 MAVROGORDATO, J., Esq., 6 Palmeira Court, Hove, Sussex.
- 1921 MAVROJANI, CAPTAIN S., M.A., B.C.L., Clyro Court, Clyro, Hereford.
- 1901 McDOWALL, REV. STEWART A., 5 Kingsgate Street, Winchester.
- 1905 McEWEN, HUGH DRUMMOND, Esq., F.S.A. (Scot.), Custom House, Leith, N.B.
- 1868 McLACHLAN, R. W., Esq., Apt. 9, The Kensington, 4412 St. Catherine Street, Westmount, Montreal, Canada.
- 1916 MEIGH, ALFRED, Esq., Ash Hall, Bucknall, Stoke-on-Trent.
- 1905 MESSENGER, LEOPOLD G. P., Esq., 151 Brecknock Road, Tufnell Park, N. 19.
- 1897 MILNE, J. GRAFTON, Esq., M.A., Bankside, Lower Bourne, Farnham, Surrey.
- 1921 MILNE, MRS. J. GRAFTON, Bankside, Lower Bourne, Farnham, Surrey.
- 1910 MITCHELL LIBRARY, THE, Glasgow, The Librarian.

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- 1898 *MONCKTON, HORACE W., Esq., F.L.S., F.G.S., 3 Harcourt Buildings, Temple, E.C. 4, and Whiteclairn, Wellington College Station, Berks.
- 1920 MONTAGU, ALFRED C., Esq., 8 Abingdon Villas, W. 8.
- 1888 MONTAGUE, LIEUT.-COL. L. A. D., Penton, near Crediton, Devon.
- 1905 MOORE, WILLIAM HENRY, Esq. (address not known).
- 1879 MORRIESON, LIEUT.-COL. H. W., R.A., F.S.A., F.R.S.A., 42 Beaufort Gardens, S.W. 3.
- 1904 MOULD, RICHARD W., Esq., Newington Public Library, Walworth Road, S.E. 17.
- 1916 *MYLNE, EVERARD, Esq., Mount Stuart, 81 Bristol Road, Weston-super-Mare.
- 1909 NAGG, STEPHEN K., Esq., 1621 Master Street, Philadelphia, U.S.A.
- 1906 NEWBERRY LIBRARY, The Librarian, Chicago, U.S.A.
- 1905 *NEWELL, E. T., Esq., President of the American Numismatic Society, 156th Street, West of Broadway, New York, U.S.A.
- 1898 OGDEN, W. SHARP, Esq., F.S.A., Naseby, East End Road, Finchley, N. 3.
- 1916 OGLE, CHRISTOPHER, Esq., M.A., Austin Friars House, E.C. 2.
- 1897 *O'HAGAN, HENRY OSBORNE, Esq., Riverhome, Hampton Court.
- 1882 OMAN, PROF. SIR CHARLES, M.P., K.B.E., M.A., LL.D., F.S.A., F.B.A., All Souls College, Oxford, *President*.
- 1911 OPPENHEIMER, HENRY, Esq., F.S.A., 9 Kensington Palace Gardens, W. 8.
- 1904 d'ORBELIANI-RUSTAFJELL, COL. ROBERT, F.R.G.S., Allerton House, 143 East 39th Street, New York, U.S.A.
- 1922 PAKENHAM, IVO, Esq., Ballinacurra House, Middleton, Cork.
- 1903 PARSONS, H. ALEXANDER, Esq., Dalmuir, Cedar Avenue, Rickmansworth.
- 1915 PEARS, LT.-COL. G. B., R.E., c/o Cox & Co., Charing Cross, S.W. 1.
- 1894 PERRY, HENRY, Esq., Middleton, Plaistow Lane, Bromley, Kent.
- 1920 PHILIPSEN, HR. GUSTAV, Castelsvej 23^{iv}, Copenhagen, Denmark.
- 1917 PHIPPS, LIEUT.-COL. P. RAMSAY, F.R.G.S., 17 St. James's Court, S.W. 1.

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- 1888 PINCHES, JOHN HARVEY, Esq., Whitehill Cottage, Meopham, Kent.
- 1915 POYSER, A. W., Esq., M.A., 64 Highfield Street, Leicester.
- 1923 PRAGUE, Bibliothèque de l'Université, Czecko-Slovakia.
- 1903 PRICE, HARRY, Esq., Arun Bank, Pulborough, Sussex.
- 1911 PRICHARD, A. H. COOPER, Esq. (address not known).
-
- 1918 RAO, K. ANANTASAMI, Esq., Curator of the Government Museum, Bangalore, India.
- 1890 RAPSON, PROF. E. J., M.A., M.R.A.S., 8 Mortimer Road, Cambridge.
- 1915 RASQUIN, M. GEORGES, Tanglewood, Bushey Park, Herts.
- 1923 RAVEL, MONSIEUR O., 7 Bd. de Lorraine, Pointe Rouge, Marseilles.
- 1909 RAYMOND, WAYTE, Esq., 489 Park Avenue, New York City, U.S.A.
- 1903 REGAN, W. H., Esq., 17 Queen's Road, Bayswater, W. 2.
- 1876 *ROBERTSON, J. DRUMMOND, Esq., M.A., 65 Ladbroke Grove, Notting Hill, W. 11.
- 1911 *ROBINSON, E. S. G., Esq., B.A., 23 Upper Phillimore Gardens, W. 8.
- 1910 ROGERS, REV. EDGAR, M.A., O.B.E., 5 Essex Villas, W. 8.
- 1919 ROSE, EDWARD E. PILKINGTON, Esq., I.C.S., Loughton, Essex.
- 1903 RUBEN, PAUL, Esq., Ph.D., Alte Rabenstrasse, 8, Hamburg, Germany.
- 1919 RYAN, V. J. E., Esq., Hôtel des Trois Couronnes, Vevey, Switzerland.
- 1916 SAINT LOUIS NUMISMATIC SOCIETY, 4865 Lindell Boulevard, St. Louis, Mo., U.S.A.
- 1872 *SALAS, MIGUEL T., Esq., 247 Florida Street, Buenos Ayres.
- 1916 *SALISBURY, F. S., Esq., M.A., Limbrick Hall, Harpenden, Herts.
- 1919 SAVAGE, W. LISLE, Esq., 14 Mill Street, Maidstone, Kent.
- 1917 SEABY, B. A., Esq., c/o Messrs. Spink & Son, Ltd., 17-18 Piccadilly, W. 1.
- 1921 SEAGER, RICHARD B., Esq., c/o Baring Bros., Ltd., 8 Bishopsgate, E.C. 2.
- 1907 *SELTMAN, CHARLES T., Esq., 24 Fulbroke Road, Cambridge.
- 1890 SELTMAN, E. J., Esq., Villa Maria, S. Giorgio a Cremano, Naples.

ELECTED

- 1900 SHACKLES, GEORGE L., Esq., Elm Lodge, Hornsea, E. Yorks.
- 1913 SHIRLEY-FOX, J. S., Esq., R.B.A., Kingsbury Hill House, Marlborough, Wilts.
- 1896 SIMPSON, C. E., Esq. (address not known).
- 1893 *SIMS, BRIG.-GENERAL R. F. MANLEY-, C.M.G., D.S.O., 163 Strand, W.C. 2.
- 1896 SINHA, KUMVAR KUSHAL PAL, M.A., RAIS OF KOTLA, Kotla, Agra, India.
- 1918 *SLIGO, THE MARQUESS OF, F.S.A., F.R.G.S., 7 Upper Belgrave Street, S.W. 1.
- 1890 SMITH, W. BERESFORD, Esq., Pengwern, Herne Road, Worthing.
- 1905 SNELLING, EDWARD, Esq., 26 Silver Street, E.C. 2.
- 1909 SOUTZO, M. MICHEL, 8 Strada Romana, Bucharest.
- 1922 SPENCER-CHURCHILL, CAPT. E. G., Northwick Park, Blockley.
- 1894 SPINK, SAMUEL M., Esq., 17-18 Piccadilly, W. 1.
- 1902 STAINER, CHARLES LEWIS, Esq., Woodhouse, Iffley, Oxford.
- 1922 STARKEY, W. BEAMONT, Esq., Lyonsdown, Ilfracombe.
- 1920 STEWART, K. D., Esq., 17 Todd Street, Manchester.
- 1914 *STREATFEILD, MRS. SYDNEY, 22 Park Street, W. 1.
- 1910 SUTCLIFFE, ROBERT, Esq., 21 Market Street, Burnley, Lancs.
- 1914 SYDENHAM, REV. EDWARD A., M.A., The Vicarage, Wolvercote, Oxford.
- 1885 SYMONDS, HENRY, Esq., F.S.A., Staplegrove Elm, Taunton.
- 1896 *TAFFS, H. W., Esq., 35 Greenholm Road, Eltham, S.E. 9.
- 1879 TALBOT, COL. THE HON. MILO G., C.B., Bifrons, Canterbury.
- 1919 TARAPOREVALA, VICAJI D. B., Esq., 190 Hornby Road, Fort, Bombay.
- 1917 TAYLOR, GLEN A., Esq., 63 Lewis Road, Neath, Glamorgan.
- 1892 *TAYLOR, R. WRIGHT, Esq., M.A., LL.B., F.S.A., 8 Stone Buildings, Lincoln's Inn, W.C. 2.
- 1887 THAIRLWALL, F. J., Esq., 12 Upper Park Road, N.W. 3.
- 1920 THOMAS, J. ROCHELLE, Esq., Elm House, Ellison Road, S.W. 13.
- 1918 THORBURN, PHILIP, Esq., Flat 3, 91 South Side, Clapham Common, S.W. 4.
- 1894 TRIGGS, A. B., Esq., Bank of New South Wales, Yass, New South Wales.
- 1921 VALENTINE, W. H., Esq., 60 Upper Kennington Lane, S.E. 11.

ELECTED

- 1912 VAN BUREN, DR. A. W., American Academy, Porta San Pancrazio, Rome.
- 1916 VANES, REV. J. A., Wesleyan Mission, Shimoga, Mysore, India.
- 1899 VLASTO, MICHEL P., Esq., 12 Allée des Capucines, Marseilles, France.
- 1905 WACE, A. J. B., Esq., M.A., Leslie Lodge, Hall Place, St. Albans.
- 1923 WALES, The National Museum of, Cardiff.
- 1883 WALKER, R. K., Esq., M.A., J.P., Watergate, Meath Road, Bray, Ireland.
- 1897 WALTERS, FRED. A., Esq., F.S.A., 28 Great Ormonde Street, W.C.1, and St. Mildred's, Temple Ewell, Dover, *Hon. Secretary*.
- 1911 WARRE, MAJOR FELIX W., O.B.E., M.C., 128 Church Street, W. 8.
- 1920 *WATSON, COMMANDER HAROLD NEWALL, R.N., Belmont, 10 Curzon Park, Chester.
- 1901 *WATTERS, CHARLES A., Esq., 152 Princes Road, Liverpool.
- 1917 WATTS, GERALD A., Esq., Drumlerry, Londonderry.
- 1901 WEBB, PERCY H., Esq., M.B.E., 4 and 5 West Smithfield, E.C. 1, *Hon. Treasurer*.
- 1885 *WEBER, F. PARKES, Esq., M.D., F.S.A., 13 Harley Street, W. 1.
- 1904 †WEIGHT, WILLIAM CHARLES, Esq., Erica, The Broadway, Letchworth.
- 1905 WEIGHTMAN, SURGEON-CAPTAIN A. E., R.N., F.S.A., O.B.E., Junior United Service Club, Charles Street, St. James's, S.W. 1.
- 1920 *WHEELER, ERNEST H., Esq., 56 Caledonian Road, N. 1.
- 1915 WHITEHEAD, R. B., Esq., M.A., I.C.S. (ret'd.), M.R.A.S., Bootle Rectory, Cumberland.
- 1869 *WIGRAM, MRS. LEWIS, The Rookery, Frensham, Surrey.
- 1921 WILKINSON, SURGEON-COMMANDER E. A. G., Kingshot, St. Cross, Winchester, Hants.
- 1908 WILLIAMS, T. HENRY, Esq., 15 Stanwick Road, W. 14.
- 1910 WILLIAMS, W. I., Esq., Beech Villa, Nelson, Cardiff.
- 1881 WILLIAMSON, GEO. C., Esq., F.R.S.L., Burgh House, Well Walk, Hampstead, N.W. 8.
- 1906 WILLIAMSON, CAPT. W. H. (address not known).
- 1906 WOOD, HOWLAND, Esq., Curator of the American Numismatic Society, 156th Street, W. of Broadway, New York, U.S.A.

ELECTED

- 1920 WOODWARD, W. H., Esq., 39 Harley House, N.W. 1.
1920 *WOODWARD, A. M. TRACEY, Esq., Chinese P.O. Box No. 1044,
Shanghai, China.
1903 WRIGHT, H. NELSON, Esq., I.C.S., M.R.A.S., Bareilly, United
Provinces, India.
1920 WYMAN, ARTHUR CRAWFORD, Esq., 29 Place Dauphine,
Paris I.

1922 YOANNA, A. DE, Esq., B.A., M.D., 111 Pierrepont Street,
Brooklyn, N.Y.
1880 YOUNG, ARTHUR W., Esq., 12 Hyde Park Terrace, W. 2.

1919 ZIEGLER, PHILIP, Esq., Lilly Villa, Victoria Park,
Manchester.

HONORARY FELLOWS

ELECTED

- 1898 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY,
Palazzo Quirinale, Rome.
- 1891 BABELON, M. ERNEST, Membre de l'Institut, Bibliothèque
Nationale, Paris.
- 1903 BAHRFELDT, GENERAL DER INFANTERIE A. D., PROFESSOR
MAX VON, Dr.Phil., Zinksgarten Strasse 2, Halle (Saale),
Germany.
- 1898 BLANCHET, M. ADRIEN, Membre de l'Institut, 10 Bd.
Émile Augier, Paris XVI.
- 1899 GAERICI, PROF. DR. ETTORE, S. Giuseppe dei Nudi 75, Naples.
- 1893 JONGHE, M. LE VICOMTE B. DE, Rue du Trône, 60, Brussels.
- 1904 KUBITSCHKE, PROF. J. W., Pichlergasse, 1, Vienna IX.
- 1893 LOEBBECKE, HERR A., Cellerstrasse, 1, Brunswick.
- 1904 MAURICE, M. JULES, 15 Rue Vaneau, Paris VII.
- 1899 PICK, DR. BEHRENDT, Münzkabinett, Gotha.
- 1895 REINACH, M. THÉODORE, Membre de l'Institut, 2 Place des
États-Unis, Paris.
-

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- 1883 CHARLES ROACH SMITH, Esq., F.S.A.
- 1884 AQUILLA SMITH, Esq., M.D., M.R.I.A.
- 1885 EDWARD THOMAS, Esq., F.R.S.
- 1886 MAJOR-GENERAL ALEXANDER CUNNINGHAM, C.S.I., C.I.E.
- 1887 JOHN EVANS, Esq., D.C.L., LL.D., F.R.S., P.S.A.
- 1888 DR. F. IMHOOF-BLUMER, Winterthur.
- 1889 PROFESSOR PERCY GARDNER, Litt.D., F.S.A.
- 1890 MONSIEUR J. P. SIX, Amsterdam.
- 1891 DR. C. LUDWIG MÜLLER, Copenhagen.
- 1892 PROFESSOR R. STUART POOLE, LL.D.
- 1893 M. W. H. WADDINGTON, Sénateur, Membre de l'Institut, Paris.
- 1894 CHARLES FRANCIS KEARY, Esq., M.A., F.S.A.
- 1895 PROFESSOR DR. THEODOR MOMMSEN, Berlin.
- 1896 FREDERIC W. MADDEN, Esq., M.R.A.S.
- 1897 DR. ALFRED VON SALLET, Berlin.
- 1898 THE REV. CANON W. GREENWELL, M.A., F.R.S., F.S.A.
- 1899 M. ERNEST BABELON, Membre de l'Institut, Paris.
- 1900 PROFESSOR STANLEY LANE-POOLE, M.A., Litt.D.
- 1901 S. E. BARON WLADIMIR VON TIESENHAUSEN, St. Petersburg.
- 1902 ARTHUR J. EVANS, Esq., M.A., F.R.S., F.S.A.
- 1903 M. GUSTAVE SCHLUMBERGER, Membre de l'Institut, Paris.
- 1904 HIS MAJESTY VICTOR EMMANUEL III, KING OF ITALY.
- 1905 SIR HERMANN WEBER, M.D.
- 1906 COMM. FRANCESCO GNECCHI, Milan.
- 1907 BARCLAY V. HEAD, Esq., D.Litt., D.C.L., Ph.D., Corr. de l'Inst.
- 1908 PROFESSOR DR. HEINRICH DRESSSEL, Berlin.
- 1909 HERBERT A. GRUEBER, Esq., F.S.A.
- 1910 DR. FRIEDRICH EDLER VON KENNER, Vienna.
- 1911 OLIVER CODRINGTON, Esq., M.D., M.R.A.S., F.S.A.
- 1912 GENERAL-LEUTNANT MAX VON BAHRFELDT, Hildesheim.
- 1913 GEORGE MACDONALD, Esq., M.A., LL.D.
- 1914 JEAN N. SVORONOS, Athens.
- 1915 GEORGE FRANCIS HILL, Esq., M.A.
- 1916 M. THÉODORE REINACH, Membre de l'Institut, Paris.
- 1917 L. A. LAWRENCE, Esq., F.S.A.
- 1918 Not awarded.
- 1919 M. ADRIEN BLANCHET, Membre de l'Institut, Paris.
- 1920 H. B. EARLE-FOX, Esq., and J. S. SHIRLEY-FOX, Esq.
- 1921 PERCY H. WEBB, Esq.
- 1922 FREDERICK A. WALTERS, Esq., F.S.A.
- 1923 PROF. J. W. KUBITSCHKE, Vienna.

PROCEEDINGS
OF THE
ROYAL NUMISMATIC SOCIETY.



PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

SESSION 1922—1923.

OCTOBER 22, 1922.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Meeting of May 18 were read and approved.

The following Presents received since the May Meeting were announced, and thanks ordered to be sent to their donors:

1. American Journal of Archaeology, 1922, Pt. 2.
2. Antiquaries Journal, Vol. ii, Pt. 3.
3. Bulletin de la Société des Antiquaires de l'Ouest, 1921, Pt. 4; 1922, Pt. 1.
4. Cambridge Antiquarian Society Transactions, Vol. xxxi.
5. Journal of the Royal Society of Antiquaries of Ireland, 1922, Pt. 1.
6. Journal of Hellenic Studies, 1922, Pt. 1.
7. Revue Belge de Numismatique, 1922, Pts. 1-2.
8. Revue Suisse de Numismatique, 1922, Pt. 3.
9. Syria, 1922, Pt. 3.
10. Yearbook of the New York Numismatic Club, 1918-21.
11. Zeitschrift für Numismatik, 1922, Pts. 3-4.

Mr. W. Beaumont Starkey was elected a Fellow of the Society, and Miss Muriel Eleanor Haydon Lloyd and M. Pierre Charlier were proposed for election.

Mr. Henry Garside showed a pattern two annas and one anna of India struck in copper-nickel and undated, but of Victoria's reign.

Mr. H. W. Taffs showed a penny of Henry I of type ix (B.M.) (Hkns 263) of the moneyer DERMAN ON LUND, a new type for this moneyer.

Rev. Edgar Rogers showed a series of Greek copper coins in remarkably fine condition.

Mr. W. H. Woodward showed a Syracusan tetradrachm with a wingless Nike.

Mr. V. J. E. Ryan showed a Henry VII ryal and a Henry VI noble, and a penny of Archbishop Ethered and five first brass of Galba and Hadrian.

Mr. Hill described the "Greek coins acquired by the British Museum in 1921". (This paper was printed in the *Chronicle*, 1922, pp. 149-75.) Mr. Hill also read a paper by Mr Sydney Smith on "The Evidences of pre-Greek currency in the Near East". (This paper was printed in the *Chronicle*, 1922, pp. 176-85.)

NOVEMBER 16, 1922.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Meeting of October 22 were read and approved.

Rev. W. H. Fane Dickson, Dr. Joseph P. Dee, and Mr. Ivo Pakenham were proposed for election.

Miss Muriel Eleanor Haydon Lloyd and M. Pierre Charlier were elected Fellows of the Society.

Dr. Sidney Fairbairn exhibited a pewter medal of the French Revolution of 1848 with portrait of a woman candidate for Parliament, and *rev.* a demand for liberty and equality for the two sexes.

Mr. V. J. E. Ryan exhibited a double sovereign of Henry VII, and unites of Charles I of Bristol and Exeter and a Henry VI $\frac{1}{2}$ noble of the pine-cone mascle coinage, and a Charles I half-crown of Exeter of the "Declaration" type without ex below date, and for comparison a half-crown of the usual type.

Mr. H. W. Taffs showed a Henry VIII halfpenny, mm. portcullis, found at Dunwich.

Mr. Fredk. A. Harrison showed a double taler of Maximilian of Bavaria as administrator of Prussia.

Mr. Bert A. Seaby on behalf of Messrs. Spink & Son exhibited the following rarities:

- (1) German leather note.
- (2) 4 Thaler piece of Brunswick 1655.
- (3) 1 Peso of Mexico of General Villa, 1914—reads MUERA HUERTA (Death to Huerta).
- (4) Noble of Philippe le Bon (Flanders) hardly distinguishable from an English noble.
- (5) Series of U.S.A. commemorative half dollars struck in 1921-2: Pilgrim Fathers, Missouri, Maine, Alabama, and Grant.

(6) Panama-Pacific Commemorative set 50\$ (two varieties), 2 $\frac{1}{2}$ \$, 1\$, $\frac{1}{2}$ \$, including the only 50\$ ever issued by the U.S. mint.

Mr. W. H. Valentine exhibited the manuscript of his Catalogue of Coins of the Native States of India in the Indian Museum, Calcutta.

Mr. Mattingly read a paper on "The Roman Senate: with a note on Sertorius". The reader began by reviewing the different classes of ancient coins to which the term "Serrati" has been applied, traced a clear distinction between the Syrian and Macedonian serrati on the one hand and the Roman and Carthaginian on the other, and discussed the methods of production. He then proceeded to review the Roman serrati, dividing them into five main groups and suggesting dates for each. He interpreted the serration of the edge as a guarantee against plating and regarded this as part of the policy of the democratic party in Rome. As

such it was taken up by the Marian faction, notably by the praetor M. Marius Gratidianus, and opposed by the Sullan.

In the course of the paper, different sets of "Serrati" were assigned to 118 B.C., the foundation of Narbo, to 80-73 B.C. Sertorius in Spain, and to 59-51 B.C. Julius Caesar in Gaul.

An interesting discussion followed, mainly on the method of production, in which the President, and Mr. P. H. Webb, took part. (This paper will be printed in the *Chronicle*.)

DECEMBER 21, 1922.

SIR HENRY H. HOWORTH, K.C.I.E., F.R.S., F.S.A., &c.,
Vice-President, in the Chair.

The Minutes of the Meeting of November 16 were read and approved.

Rev. W. H. Fane Dickson, Dr. Joseph P. Dee, and Mr. Ivo Pakenham were elected Fellows of the Society.

Messrs. A. H. F. Baldwin and Richard Cartwright and Monsieur O. Ravel were proposed for election.

The following Presents were announced, and thanks ordered to be sent to the donors:

1. Antiquaries Journal, 1922, Pt. 6.
2. Archaeologia Aeliana, 1922.
3. American Journal of Archaeology, 1922, Pt. 3.
4. Bonner Jahrbücher, Vol. cxxvii.
5. Bulletin de la Société des Antiquaires de l'Ouest, 1922, Pt. 3.
6. Catalogue of the Weber Collection, Vol. i, by L. Forrer;
from Messrs. Spink & Son., Ltd.
7. Fornvännen, 1920.
8. J. G. Milne, Two Roman Hoards from Egypt; *from the Author.*
9. Rivista Italiana, 1922, Pts. 3 and 4.
10. Laffranchi, L.: XI Anno Imperatorio di Constantino Magno;
from the Author.
11. Suomen Museo, Vols. xxix-xxx.

Mr. W. Gilbert exhibited a seventeenth-century halfpenny of London, hitherto unknown, reading:

Obv. EDWARD. LOVELL. AT. YE. 2. BLAK.—Two boys standing.

Rev. IN. BLACKMORE. STR. TOBACON.—HIS. HALFE. PENY.

The token was in fine condition. Mr. Gilbert remarked that not only was it of interest as an unpublished token, but still more for the fact of its being the first token recorded for Blackmoor Street, which was close to Drury Lane. The Black Boy appears to have been a tobacconist's sign from early times. Ben Jonson mentions a tobacconist's in Bucklersbury having this sign (in his *Bartholomew Fair*). Many famous Inns have borne the sign, especially one at Chelmsford, once a coaching inn of first importance and immortalized by Dickens in the *Pickwick Papers*.

Mr. Ernest Henry Wheeler showed six remarkable English coins all of the highest rarity: the unique half groat of Henry III of Canterbury, *rev.* WIL/LEM/ ON C/ANT.; a London groat of Edward I with a rosette in centre of drapery round king's neck, another with a trefoil of pellets on king's breast, and third with four pellets on the king's breast; a farthing of Edward II (?) of Berwick mint, with bear's head in two quarters, and a penny of Edward III of Berwick mint, with bear's head in one quarter.

Mr. Frederick A. Harrison exhibited a series of Russian roubles from Peter the Great (1689) to Nicolas II (1917), and an extensive collection of paper money including specimens of the last issues of the English North American colonies and the first issues of the independent U.S.A.

Mr. Henry Garside showed a Spanish Quarter Real, dated 1777, countermarked for general circulation in Trinidad; a bronze cent dated 1919, the first denomination struck for Hong Kong bearing the effigy of His Majesty King George V; two Indian pattern annas dated 1903 and 1904 and a third dated 1905 struck in copper.

Mr. William H. Valentine exhibited a set of coins of Eritrea and Italian Somaliland, presented to him by H.M. King Victor Emanuel III of Italy.

Mr. H. W. Taffs brought a series of English and Colonial patterns and proofs and tokens including a gold ingot of Australia and the recently discovered Bristol penny of Matilda.

Mr. Lionel L. Fletcher exhibited a series of satirical imitations of the copper coinage of Napoleon III, three early tickets issued by T. G. and John Hinde, bearing the head of Charles II; a Scottish seventeenth-century ticket issued by William Dicke of Braid, afterwards Sir William Dicke, Lord Provost of Edinburgh, three South American tickets, viz. 2 of Buenos Ayres and 1 of Potosi.

Mr. Arthur Lloyd and Miss Lloyd showed a fine series of rare coins of Syracuse.

Mr. G. C. Haines showed a series of second and third brass of the later Roman empire, of Mariniana; Laelianus; Tetricus Junior (with bust to left); silver (or billon) of Macrianus II (*Rev.* AEQVTAS AVGG and ROMAE AETERNAE); of Quietus; of Carus (namespelled "KARVS"); of Nigrinianus; of Domitius Domitianus; of Romulus son of Maxentius; of Alexander Emperor of Carthage; of Martinianus of Vetrano; of Flaccilla; and a silver medallion of Valentinianus II, and a silver coin of Procopius.

Mr. J. H. Pinches and Mr. E. J. Pilcher showed medals and photographs illustrating the process of making dies direct from photographs (photo-sculpture).

Lt.-Colonel H. W. Morrieson, F.S.A., exhibited a fairly complete series of silver milled coins of Elizabeth.

Mr. Leopold Messenger showed some Obsidional pieces and money of necessity issued during the last three centuries at the sieges of Vienna, Leyden, Maestricht, and Breda.

Rev. Edgar Rogers, O.B.E., showed an extensive series of Greek copper coins of Asiatic mints.

Mr. J. Grafton Milne showed a Didrachm of Kyzikos: *obv.* head of Koze Soteira: *rev.* KYZI KHNAN Tripod; flaming torch in exergue, a type not in v. Fritze's monograph on

silver coinage of Kyzikos.—A similar one, but with different monogram, was in Pozzi sale 2222.

Mr. L. A. Lawrence, F.S.A., showed a series of rare coins of Allectus and Carausius.

JANUARY 18, 1923.

PERCY H. WEBB, Esq., M.B.E., Treasurer, in the Chair.

The Minutes of the Meeting of Dec. 21 were read and approved.

The following Presents were announced, and thanks ordered to be sent to their donors:

1. *Antiquaries Journal*, 1923, Pt. 1.
2. Sotheby's Coin Sale Catalogues, 1919-22; *presented by Messrs. Sotheby, Wilkinson & Hodge.*

Messrs. A. H. F. Baldwin and Richard Cartwright and Monsieur O. Ravel were elected Fellows of the Society, and Mr. Raymond Carlyon-Britton was proposed for election.

Rev. E. Rogers exhibited a fine series of large Greek Imperial coins of Amasia, Koinon of Bithynia, Apollonia (Mysia), Hadrianeia, Pergamum, Samos, Antioch (Caria), Tabae, Rhodes, Sardes, Thyateira, Synnada, Trebenna, Side, Mallus, Tarsus (Antinous), Cyprus, and Tripolis (Phoenicia).

Mr. L. A. Lawrence exhibited a series of Roman republican coins with s.c.

Mr. A. H. Baldwin sent for exhibition an aureus of the moneyers L. Cestius and C. Norbanus: *obv.* Bust of Sibyl and *rev.* Cybele in lion-biga, and denarii of M. Volteius, M.F., *rev.* Tripod lebes s.c.d.t., of Q. Pomponius Rufus and of L. Plaetorius, L.F.

Mr. Sydenham brought a large series of Roman republican coins in illustration of his paper.

Mr. G. C. Haines exhibited a semissis of Constans II, *obv.* CN COTVINI P., Busts of Constans II (on l.) and of Con-

stantine (on r.). Between the busts +. *Rev.* VICTO AVG. (?g). Heraclius (on l.) Tiberius (on r.) each standing facing. Between them cross. *Exergue* CONOB. The semissis of this type appears to be unpublished. The solidus is fairly common.

Rev. E. A. Sydenham read a paper on Special Senatorial Issues under the Roman Republic. His main theme is to discuss the meaning of s.c. on Roman coins and the irregular or exceptional usages of the formula, e.g. on (1) Coins of the Republic. (2) Provincially struck Aes of Caligula and Claudius. (3) ex.s.c. on gold and silver of Nero. (4) s.c. on silver coins of Galba and Clodius Macer. (5) On coins of the Tetrarchy. (6) On coins of Antioch. Group (1) which was dealt with on this occasion involves a large series and opens up numerous problems, hence this paper was confined to a consideration of Special Senatorial issues under the Republic; s.c. cannot be dissociated from kindred expressions such as EX S.C., EX A.P.U., D.S.S., &c. These expressions invariably relate to the issue of the coins and not to their types (cf. Grueber, *Coins of Rom. Rep.*, Introd.). The points considered were: (1) The status and functions of moneyers under the Republic. Regular Tresviri; Special moneyers. (2) Government contract and private enterprise with respect to the issue of money. (3) Government subsidies and grants of the right of coinage to particular individuals. Issues for special purposes, military, civil, &c. (4) Re-statement as to mintage, occasions of issue, &c., of various coins described in Grueber, *Catalogue of Coins of the Roman Republic in the British Museum*.

FEBRUARY 15, 1923.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Meeting of January 18 were read and approved.

Mr. Raymond Carlyon-Britton was elected a Fellow of the Society.

The following Presents were announced, and thanks ordered to be sent to the donors:

1. American Journal of Archaeology, 1922, Pt. 4.
2. Coins of Hyder Ali and Tipu Sultan, by J. R. Henderson; *from the Author.*
3. Coins of the Sultans of Bengal, by N. K. Bhattasali; *from the Author.*
4. Fornvännen, 1921.
5. Gli Aurei Siracusani di Cimone et di Eveneto, by Mons. Gius. de Ciccio; *from the Author.*
6. Journal of Hellenic Studies, 1922, Pt. 2.
7. Proceedings of the Society of Antiquaries of Scotland, 1921-22.
8. ΤΑΡΑΣ ΟΙΚΙΣΤΗΣ, by M. P. Vlasto; *from the Author.*

Mr. L. A. Lawrence showed a series of coins illustrating his paper.

The Secretary exhibited the medal presented to the Society by Mrs. Frits Holm, wife of the Danish American explorer to commemorate her husband's archaeological expedition to China.

Obv.—Head of FRITS HOLM r.; below, Albert Bruce Joy fecit mcmxxi.

Rev.—Den Holm Nestorianske Expedition til Sianfu Shensi N. V. Kina. MCMVII-VIII TIL MINDE. Around in Chinese "Tablet of the propagation throughout China of the luminous religion (Nestorian Christianity) of Ta Ch'in (the Byzantine Emperor)".

Mr. Percy H. Webb exhibited a seventeenth-century token of Croydon:

Obv.—Queen's head: DORATHE.EATEN.

Rev.—AT CROYDEN 1666: D.E.

Mr. Webb also showed a series of coins of Carausius and Allectus to illustrate his paper.

Mr. L. A. Lawrence, F.S.A., read a note on a penny of

a new type of Edward I. (This paper is published in this volume of the *Chronicle*, pp. 56-59.)

Mr. Frederick A. Walters, F.S.A., suggested that the coin might be a silver pattern for a gold piece. The gold penny of Henry III had been too large and this might have been an attempt to get a gold coin of suitable weight.

Mr. Henry Symonds, F.S.A., supported this view, saying that the absence of the mention of a gold coin in the indenture of 1279 did not exclude experiments for a gold coinage, as it referred only to coins actually to be issued.

Mr. Percy H. Webb, M.B.E., then read a short paper, entitled "Why did Carausius issue silver denarii?" He laid before the Society the main facts as yet ascertained—the debt of Carausius to Postumus and his successors, the probable existence of two denominations in bronze under Carausius, the subsequent borrowings of Diocletian from his system. The main problem centred round the mark *rsr*. It could hardly be a mint-mark, as it was found on coins apparently of different mintage; it was not confined to the silver although usually found on it, but occurred also on gold and on bronze with radiate heads. It seemed impossible then to interpret it as a mark of value. The bronze coins with *rsr* might conceivably be a different denomination from those without. With so much ascertained, a solution should not be far to seek.

The President congratulated Mr. Webb on his lucid exposition of a fascinating problem and commented particularly on the Gallic associations of Carausius, and further on the fact that Postumus had taken care to maintain the denarius. Mr. Mattingly raised the question of the source of Carausius's silver supply: was it in any way connected with the silver wealth of Britain in the fourth century?

MARCH 15, 1923.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Meeting of February 15 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to their donors:

1. Annual of the British School at Athens, Vol. xxiv.
2. Annual Report of U.S. Museum, 1922.
3. A. Blanchet : *Monnaies Gauloises Inédites*; *from the Author*.
4. *Revue Belge de Numismatique*, 1922, Pts. 3-4.
5. *Rivista Italiana di Numismatica*, 1922, Pt. 4.
6. Howland Wood. U.S. Commemorative Coins.

Mr. Leonard Burrows was proposed for election as a Fellow of the Society.

Mr. G. C. Brooke exhibited eighteen harp groats of Henry VIII from a find in Co. Down discovered some years ago.

Mr. L. G. P. Messenger showed three silver Russian dengas of the sixteenth century.

Mr. Henry Garside showed a four lari and one lari in copper of Shams al-Din Iskandar, Sultan of the Maldiv Islands, dated 1831 A.H.

Mr. H. W. Taffs showed a taler of Ferdinand III of Austria made into a box and containing two miniatures of about the same date.

Mr. Lawrence showed a series of coins of Henry VIII to illustrate Mr. Brooke's paper.

Mr. Fredk. A. Walters, F.S.A., exhibited seven sestertii of Hadrian:

1. Cohen No. 261, with fine portrait of the earliest type.

2. Cohen No. 164. *Rev.* ANN.DCCCLXXIII NAT VRB.P. CIR.CON. The rarest type of Hadrian and the only dated Roman coin.
3. Cohen No. 1212. *Rev.* RELIQA VETERA, &c. Emperor burning bonds, three Citizens applauding.
4. Cohen No. 1436. *Rev.* TEMPORVM FELICITAS, four children representing the four seasons without s.c. and described by Cohen as a medallion.
5. Cohen No. 28. *Rev.* ADVENTVI AVG BRITANNIAE: the coin is illustrated by Akerman and is of great rarity (formerly in Capt. Smyth's collection).
6. Cohen No. 71. *Rev.* FELICITATI AVG PP COS III, a fine example of the Galley type.
7. Cohen No. 1422. *Rev.* The temple of Venus and of Rome erected by Hadrian on the Via Sacra. From the Yorke-Moore collection.

Mr. Harold Mattingly exhibited for Lt.-Col. G. B. Pears, R. E., a series of antoniniani of Trajan Decius from a recent find near Plevna.

Mr. William Gilbert showed an aureus of Faustina the Elder in fine condition, *rev.* leg. AETERNITAS and female figure, most probably Fortuna (Lot 1534 in Vierordt collection).

Mr. Percy H. Webb exhibited a bronze coin of Vaballathus, *rev.* AEQUITAS AVG., three varieties of bronze coins of Annianus Verus, a second brass of Florian, and an unpublished bronze coin of Carus and Carinus of Gaulish mint. *Obv.* Radiate busts r. CARUS ET CARINUS AUGG. *Rev.* Victory walking l., wreath and palm VICTORIA AUGG.

A discussion took place on the Government's proposal to charge admission to the British Museum, and the following resolution was unanimously passed and ordered to be sent to the Chancellor of the Exchequer:

"That this Society regrets to learn of the proposal to impose a charge for admission to the British Museum, feeling that the disadvantage and the discouragement of study and research, especially among beginners and chance visitors, will far outweigh the small income that will be produced."

Mr. G. C. Brooke discussed the series of Harp Groats struck at the Tower of London for Irish currency in the period from 1586 to the date of the alteration of the king's style from Dominus Hiberniae to Hiberniae Rex. (This paper will appear in the *Chronicle*.)

APRIL 19, 1923.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Meeting of March 15 were read and approved.

Mr. Leonard Burrows was elected a Fellow of the Society.
Mr. C. E. Blunt was proposed for election.

Mr. William Gilbert exhibited a denarius of Severus II believed to be the only known silver coin of the Emperor.

Mr. L. A. Lawrence showed a coin with obverse from a die of a dupondius of Nero, reverse blank, weight 455 grains.

Mr. George F. Hill read a paper on "Greek coins acquired by the British Museum in 1922". (This paper is printed in this volume of the *Chronicle*.)

The President reported that he had conveyed the Society's protest against charging admission to the British Museum to the Chancellor of the Exchequer, and that the proposal had since been dropped. He had also once more drawn attention to the unsatisfactory condition of the silver coinage.

MAY 17, 1923.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Meeting of April 19 were read and approved.

The following Presents to the Society were announced, and thanks ordered to be sent to the donors :

1. Aarbøger for Nordisk Oldkyndighed, 1921.
2. Antiquaries Journal, 1923, Pt. 1.
3. British Museum Catalogue of Roman Imperial Coins, Vol. i, by H. Mattingly : *from the Trustees of the British Museum.*
4. C. J. Brown. Coins of India; *from the Clarendon Press.*
5. F. Willson Yeates. Coinage of Ireland, 1641-52; *presented by Mrs. Willson Yeates.*
6. Zeitschrift für Numismatik, 1923, Pts. 1 and 2.

Messrs. G. C. Haines and W. Gilbert were appointed to audit the Society's accounts.

Mr. C. E. Blunt was elected a Fellow of the Society, and Mr. Arnold Mallinson was proposed for election.

Mr. Frederick A. Harrison showed a series of coins illustrating the history of the Netherlands for 400 years from the time when they were joined to the Duchy of Burgundy to the formation of the present kingdom of Holland and Belgium.

Mr. Lionel L. Fletcher showed a series of 180 Dublin seventeenth-century tokens, a rare Burmese half anna, type dragon, and a Russian beard-token of Peter the Great.

Mr. W. H. Valentine showed a series of Eastern currencies of strange shapes.

Sir Charles Oman showed a series of talers of the younger Hapsburg branch in Austria and the succeeding house of Lorraine-Hapsburg.

Mr. J. Mavrogordato showed a tetradrachm of Athens (480-450 B.C.), and a drachm of 450-431 B.C., an early fourth-century tetradrachm of Samos, and a didrachm of Syracuse 344-317 B.C., and two very rare copper coins of Syracuse, *rev.* dog and horse respectively.

Mr. H. Garside showed a Five-pound pattern of 1839 and the New South Wales "holey" dollar of 1813.

Mr. Fredk. A. Walters, F.S.A., exhibited some later Roman bronze coins from Gallienus to Constantine, and a specimen

of the Constantine the Great Medallion (Cohen No. 488, Gneecchi Plate 180, no. 6).

Obv.—CONSTANTINVS MAX.AVG. Draped bust to r.

Rev.—SALVS REIP, in exergue DANVBIVS; Constantine advancing over a bridge preceded by Victory with trophy, a suppliant barbarian kneeling on one knee in front. Below the bridge a river god.

The only other example of this medallion which Cohen quotes is in the French Cabinet. The example now exhibited was found in 1916 in a field at Westerham in Kent by a farm hand, and it came into the hands of a small local dealer in antiques. Being much corroded this man ignorantly "cleaned" it by putting it in spirits of salts, which has greatly injured it, although after seven years it has somewhat recovered its original tone. The obverse is from the same die as the Paris example but the reverse is apparently from a different one. The Paris medallion is more spread than this which has had the edge beaten up.

Gibbon recalls that in A.D. 322 Constantine with the intention of chastising the Goths, who, with their allies the Sarmatians, had invaded the territories of the empire after previous victories, passed the Danube at the head of his legions, having repaired the bridge that had been constructed by Trajan, penetrated into the strongest recesses of Dacia, and when he had inflicted a severe revenge condescended to give peace to the suppliant Goths; and, according to Eusebius, added by his victorious arms all Scythia to the Roman Empire. The medallion in question, Mr. Walters suggested, commemorates these events in the reign of Constantine.

Mr. Philip Thorburn showed a rupee of Pulu Penang, struck by the E.I.C. in 1788.

Mr. William Gilbert exhibited three very rare coins:

(1) A billon coin of Tetricus, father and son, having the head of each side by side on the obverse, and reading IMPP TETRICI PII AVGG. *Rev.* Hope walking to the left, holding a flower and raising her robe, SPES PVBLICA, in the exergue the letter P. Unknown to Cohen. Formerly in the Weber collection.

(2) A silver coin of Cornelia Supera, who is supposed to have been the wife of Aemilian. *Obv.* her bust to the right, C.CORNEL SVPERA AVG. *Rev.* Vesta standing to the left holding a patera and a sceptre. A very rare coin

and one of the finest (if not the finest) specimen known. Formerly in the Vierordt collection.

(3) An Essex seventeen-century token. *Obv.* WILL. CLARKE. The Grocers' Arms in centre, *rev.* IN. ORSETT. 1659. W.P.C. in centre. Mr. Gilbert said that this was of unusual interest inasmuch as it was unpublished; it was the first token known for this place, and it further proved that the token in Williamson (No. 284) reading WILLIAM. CLARKE. (the Grocers' arms) IN. OZED. 1659 (W.P.C.) which has hitherto been attributed to St. Osyth should be placed to Orsett, instead.

Mr. J. H. Pinches exhibited the following recent medals:

Sheffield University.

1. *Obv.*—Two Glassblowers at work.

Rev.—Frank Wood Medal University of Sheffield Glass technology (by P. Metcalf).

Liverpool University.

2. Impression of reverse only in lead of Sports Medal. Minerva crowning Victor with laurel wreath (by C. J. Allen).

Physical Society.

3. *Obv.*—Head to l. "William du Bois Duddell, 1872-1917".

Rev.—Stooping female figure holding globe in one hand and lamp in other hand. Inscription round: The Physical Society of London, "Rerum naturam expandere" (by M. C. Gillick).

Glasgow School of Architecture.

4. *Obv.*—Spirit of War pointing to figure of Student as he might have been had he lived. Building in progress in distance.

Rev.—"In memory of a Student of the Glasgow School of Architecture, Arthur Leslie Hamilton, Lieutenant, H. L. I., killed in action 25th Oct. 1918."

Founded by his Father, J. Whitelaw Hamilton, A.R.S.A. (by Hazel Armour).

School of Tropical Medicine.

5. *Obv.*—Head to r. "Patrick Manson".

Rev.—Oak wreath. "Tropical Medicine A.D. 1922" in centre, by J. R. Pinches.

St. Bartholomew's Hospital Octocentenary Celebration.

6. *Obv.*—Head to l. "William Harvey 1578-1657".

Rev.—Head of founder "RAHERE" inside laurel-wreath.
Inscription round: "To commemorate the 800th anniversary" (1123-1923), St. Bartholomew's Hospital
(by C. L. Hartwell, A.R.A.).

Kosciuszko Celebration.

7. *Obv.*—Head to l. "Sanguis heroum semen libertatis, Thaddeus Kosciuszko 1746-1817."

Rev.—Soaring Eagle "Kosciuszko Centenary Committee London MCMXVII. Polonia resurgens" (by F. G. Gillick).

Pig breeders Association.

8. *Obv.*—"The National Pig breeders Association". Typical middle white pig in centre "awarded to".

Rev.—Swineherd attending swine. Greek quotation in exergue
(by H. Maryon).

The President showed series of coins of Trajan Decius, Postumus, and Aurelian, to illustrate the use of radiate and laureate crown to differentiate denominations. In the "double sestertius" of Trajan Decius he saw the forerunner of the largest brass of Postumus and of Aurelian—both with radiate heads, and contrasted with their "first brass" with laureate heads.

JUNE 21, 1923.

ANNUAL GENERAL MEETING.

PROF. SIR CHARLES OMAN, K.B.E., M.P., LL.D., F.S.A.,
F.B.A., President, in the Chair.

The Minutes of the Annual General Meeting of June 15, 1922 were read and approved.

Messrs. Leopold Messenger and W. H. Valentine were appointed scrutineers of the ballot for the election of office-bearers for the following year.

Mr. Arnold Mallinson was elected a Fellow of the Society.

The following report of the Council was laid before the Society :

The Council have again the honour to lay before you their Annual Report on the state of the Royal Numismatic Society.

It is with deep regret that they have to announce the death of the following two Honorary Fellows of the Society :

Dr. Friedrich Edler von Kenner

M. Jean N. Svoronos

and of the following six Fellows of the Society :

W. E. Marmaduke Campbell, Esq., I.C.S.

Richard Dalton, Esq.

Comm. G. Dattari.

Prof. Harvey Porter.

F. Willson Yeates, Esq.

J. Shelton Young, Esq.

They have also to announce the resignation of the following six Fellows :

Prof. Henry J. Browne, M.A.

William E. Marsh, Esq.

Miss Laura H. Montgomery.

A. J. Vooght Radford, Esq.

Alain Raffin, Esq.

F. Bertram Welch, Esq., M.A.

On the other hand they have to announce the election of the following fourteen Fellows :

A. H. F. Baldwin, Esq.

C. E. Blunt, Esq.

Leonard Burrows, Esq.

Raymond Carlyon-Britton, Esq.

Richard Cartwright, Esq.

Monsieur Pierre Charlier.

Joseph P. Dee, Esq., M.D.

Rev. W. H. Fane Dickson.
 Miss Muriel E. Haydon Lloyd.
 Arnold Mallinson, Esq.
 Ivo Pakenham, Esq.
 Monsieur O. Ravel.
 W. Beamont Starkey, Esq.
 University Library of Prag.

The number of Fellows is therefore :

	Ordinary.	Honorary.	Total.
June, 1922	276	13	289
Since elected	14	—	14
	290	13	303
Deceased	6	2	8
Resigned	6	—	6
	278	11	289

The Council have also to announce that they have decided to award the Society's medal this year to Professor Wilhelm Kubitschek of Vienna in recognition of his services to the Numismatics of the Roman Empire and of Greece under the Empire.

The Treasurer's Report which follows was then laid before the Meeting :

STATEMENT OF RECEIPTS AND DISBURSE-

FROM JUNE 1st, 1922,

Dr.

THE ROYAL NUMISMATIC SOCIETY IN ACCOUNT

	£	s.	d.	£	s.	d.
<i>To cost of Chronicle—</i>						
Printing	263	15	3			
Plates.	26	4	6			
				289	19	9
„ Medals				15	4	0
„ Rent, &c.				50	0	0
„ Refreshments, &c.				6	16	5
„ Insurance				1	10	0
„ Sundry Payments				18	10	6
				£377	0	8
„ Balance May 31, 1923—						
General Account	186	10	5			
Research Account	29	12	2			
				216	2	7
				£598	3	3

MENTS OF THE ROYAL NUMISMATIC SOCIETY
TO MAY 31st, 1923.

WITH PERCY H. WEBB, HON. TREASURER.

£r.

	£	s.	d.	£	s.	d.
<i>By Balance in hand June 1, 1922—</i>						
General Account	93	15	5			
Research Account	28	2	2			
				121	17	7
<i>By Subscriptions—</i>						
Ordinary Subscriptions	295	0	3			
Life Subscriptions	57	15	0			
Entrance Fees	12	12	0			
				365	7	3
<i>By Donations</i>				4	3	0
„ <i>Sales of Chronicles, &c.</i>				73	19	9
„ <i>Dividends on Investments</i>				27	15	8
(£942 Consol. 4% Pref. Stock of the London and North Western Railway)						
				£593	3	3

PERCY H. WEBB, *Hon. Treasurer.*

Audited and found correct,

WILLIAM GILBERT, }
G. C. HAINES, } *Hon. Auditors.*

June 15, 1923.

The Reports of the Council and of the Treasurer were adopted on the motion of the President.

Sir Charles Oman then presented the Society's Medal to be forwarded to Professor Kubitschek, and addressed the meeting as follows :

The Committee has this year resolved to bestow its medal on Professor Wilhelm Kubitschek of Vienna, a great authority on Roman coins. His work has appeared mainly in such periodicals as the *Numismatische Zeitschrift* and *Mitteilungen der Numismatischen Gesellschaft zu Wien*, and the publications of the University of Vienna. He has written mainly on the problems of the Greek-Imperial coinage of the first three centuries A. D., and on the Republican and Imperial Roman issues. Here he has done much good work by bringing to bear on the coinage his very complete knowledge of Roman and Romano-Greek inscriptions. Among the articles the following deserve individual notice: *Die Aera von Eleutheropolis in Judaea*, *Münzen von Caesarea in Samaria*, *Ninica-Claudiopolis*, *Die Münzen der Ara Pacis*, *Gold und Silber im vierten Jahrhundert nach Christi*, *Der Rückgang des Lateinischen im Orient*. He has also written many studies, monographs, reviews, and notices of collections. His *Itinerar-Studien* is an important contribution to ancient geography.

In reply Mr. Allan read the following letter of thanks from Professor Kubitschek :

To the Secretary of the

Royal Numismatic Society.

Your letter of May 18 surprised me with the information that the Council of the Royal Numismatic Society is to give me its medal. This has given me great pleasure and I beg you kindly to inform the gentlemen of the Council how much I appreciate being granted this great distinction and how exceedingly proud I am of it. For the London Numismatic Society by its *Numismatic Chronicle* and other

activities has won such great importance for the development of numismatic studies in my particular fields, ancient and early mediaeval coins, that its opinion is of great value. The vote of such famous and able representatives of numismatic studies carries great weight. I am therefore delighted to think that my name will find a place amongst those who have been awarded the medal. I shall endeavour, so long as I am able, to be of service to ancient and early mediaeval numismatics and to numismatic science in general.

Accept this expression of my esteem.

Yours sincerely,

(Signed) WILH. KUBITSCHKE.

The President then presented the Nelson Wright Medal of the Indian Numismatic Society to Mr. W. H. Valentine, to whom it has been awarded in recognition of his books on Indian and Sassanian coins.

It was agreed to alter Bye-law 28 to—

“That the three senior ordinary members of the Council shall retire at the end of each year and shall not be eligible for re-election in the same capacity until the end of the succeeding year.”

The President then delivered the following address:

THE PRESIDENT'S ADDRESS.

Our Society, by a curious chance, counts exactly as many members at the end of the year as at its commencement, viz. 289. So the fears, which I expressed in my last annual address, that the shrinkage in the size of the *Chronicle* might lead to a decrease in our outlying members, who are unable to attend our meetings and depend on the printed word alone for their touch with us, have turned out to be unfounded—a fact at which I much rejoice. Nor has the increase in the amount of our annual subscription, made two years ago, turned out to be a deterrent. There is no

growth in the number of resignations—rather a slight decrease, and, what is more satisfactory, our recruits are slightly more numerous than in 1922. The treasurer has been directed to deal a little more stringently than was customary during war-time and the immediately following period of reconstruction, with a few members who have been more than intermittent in the matter of subscriptions. I still cherish the idea that a reaction toward the old shape and size of the Journal would bring us an even larger crop of new members. But our present condition as to numbers and organization can undoubtedly be described as quite healthy and normal.

As in previous years I must commence my summary of the history of the Society for the last twelvemonth by a short notice of the members who are no longer with us. It is fortunately a much shorter list than that of 1922, which was very heavy—we lost no less than eleven of our fellows in that year. This time we have to deplore the deaths of only six, most of them, as it chances, not familiar figures at our meetings, or contributors to our Journal, but several of them well known in the numismatic world.

Mr. W. E. M. Campbell, I.C.S., was for the whole of his life an official in India, mainly working in the Central Provinces. He died in November last, while on his way home on leave. He had a fine collection of Indian coins, particularly Gupta and Moghul issues, and was an occasional contributor to the Journal of the Asiatic Society of Bengal.

Mr. J. Shelton Young, of Pershore, had been a fellow of the Society for 25 years, but took no active part in its proceedings. He had a fine collection of English coins, and was one of the few and fortunate possessors of a "Petition Crown" of Charles II.

Mr. Richard Dalton, of Bristol, was a member of comparatively recent standing, as he only joined the Society in 1914. But he was widely known as an authority on eighteenth-century British tokens. He was the author of two substantial contributions to their study, by publishing his "Silver Token Currency of Great Britain, mainly issued in 1811-12", and in his larger "Provincial Token Currency of the

eighteenth century", in which he collaborated with Mr. S. H. Hamer. These are books most copiously illustrated, and detailing all known varieties.

Mr. F. Willson Yeates was an old member, as he joined our ranks in 1889. His interests lay mainly on the by-paths of numismatic knowledge, as may be judged from the character of his papers in our *Chronicle*. These were on "Leaden Tickets of the eighteenth century" [1902], "Folly Tickets" [1904], "MacGregor's Florida Medal" [1916], and "A New South Wales Love Token" [1922], all short contributions. His longest article, a study of the Coinage of Ireland during the Rebellion of 1641-52, which was written just before his death, appeared not in our columns, but in those of the British Numismatic Society's, vol. xv, pp. 185-227.

Within the last few days we have also lost Commendatore Giannino Dattari, a resident in Egypt, and the possessor of a fine collection of Romano-Alexandrian coins, described in his monumental *Numi Augg. Alexandrini* (1901).

By far the most important of the members whom we have to regret is one who was not a British subject, nor ever a resident in Great Britain. The Rev. Harvey Porter, B.A., Phil. Doc., D.D., was a New Englander from Shelburne Falls, Mass., who after a boyhood of struggle against adverse circumstances graduated from Amherst College in 1870, and went out in the following year to Beirut as a teacher in the Syrian Protestant College in that seaport, which afterwards developed into the American University of Beirut. He rapidly became a master of the Arabic language and literature, and was one of the compilers of Porter and Wortabet's Arabic-English dictionary. He contributed numbers of articles on History and Archaeology to various learned journals and Bible dictionaries. And he was also somewhat of a botanist, as shown by his chapter in Post's *Flora of Palestine and Syria*.

But his main interest was in the Archaeological Museum of his University at Beirut, of which he was the founder and begetter. It became under his hands a very representative collection illustrating Syrian archaeology. He was most of all interested in its coin cabinet, which he had

built up into a series of 5,000 pieces, Syrian, Palestinian, and Moslem. He was at work on its catalogue when he died on Jan. 12, 1923. His last contribution to numismatic studies was an article on some unpublished coins of the Caliphate, which appeared in our *Chronicle* in 1921.

We have also lost two of our honorary fellows, Dr. F. von Kenner, of Vienna, who was our medallist in the year 1910, and M. J. Svoronos, long director of the National Cabinet of Athens. Of the former I must confess that I knew little. He was, I believe, a specialist on Roman coins, and one of the founders of the *Numismatische Zeitschrift*.

With Dr. Svoronos, on the other hand, I was well acquainted. I have visited him among the cabinets of his Athens museum, in its light and spacious halls. I once acted as his host at Oxford during one of his few visits to England. But I most particularly remember one odd meeting which we had a few years before the Great War, when we were by chance joint guests of the since-celebrated Dr. Bethmann-Hollweg, the unhappy author of the "Scrap of Paper" epigram, in his official residence at Berlin. Comparing reminiscences with Dr. Svoronos long years after, we found that we had both judged him a polite, not unkindly, and rather mediocre official, one most unlikely to leave a name in history. Dr. Svoronos was an enthusiast not only in archaeology but in politics, being a very prominent supporter of M. Venizelos and opponent of King Constantine and his Germanizing policy. He had occasionally to suffer for his outspoken politics—he was fined and (I think) imprisoned for alleged slander of his opponents. His numismatic works were many and various. The largest probably was his great Corpus of the monies of the Ptolemies, of which his museum at Athens University contains such a splendid collection. He wrote many monographs—on the coins of Crete, Delphi, the primitive Macedonian issues, &c., and projected an international Numismatic Journal, an excellent idea, but one which did not get the publicity and general acceptance that he had hoped, because in such a line of study as numismatics the things

which most interest students of one country are uninteresting to those of most others, so that in any one number of a mixed periodical much of the material is uninteresting to each individual reader. It must be confessed too that language is a bar—some peoples are more polyglot than others, but to an average English (and I may add French) reader articles in modern Greek, Spanish, or even Italian are rather unattractive, because unintelligible. The last benefit conferred by Dr. Svoronos on the numismatic world was his publication in 1922 of the volume of illustrations of the forgeries of the celebrated and nefarious Christodoulos. We gave Dr. Svoronos our medal, most worthily merited, in 1914.

The question of the still-continuing thinness of the *Chronicle* continues to fill me with sincere regret. This year again we have published only two issues instead of the normal four of pre-war days, and their size is even smaller than those of 1921–22, 314 pages, including index and record of meetings, as against about 400. I held out last year, being in a hopeful mood, some prospect of an increase in the size of our journal, consequent on the general fall in the level of prices for all commodities and for nearly all classes of labour. The compositors, however, seem to have continued for another year their successful attempt to keep up war-wage rates, and this is still more completely the case with the manipulators of photographic and process blocks. Our modest funds do not permit us to revert to our former copious illustration and generous issue of pages, if these modern English rates are still to prevail. I shall, I think, after looking at the figures of the Treasurer's annual report as to the matter of printing expenses, be forced to lay before the Council for serious consideration the proposal to start printing abroad. It is with the greatest reluctance that I shall do, but the precedents are now ample—take for example that of the Reports of the Fitzwilliam Museum, and the *Journal of Egyptian Archaeology*. As I said last year, the successful attempt of the printing trades-unions to make British learned publications impossible amounts to an attack upon knowledge and research. There seems to be only one way, though it is a way which we

shall all deplore, of making a practical protest against it. But surely, like other societies, we have now reached the end of our patience.

With regard to the highly unsatisfactory condition of our national coinage, I have not much to add to my remarks of last year. The base metal continues to issue, in decreased bulk, it is true, from the mint. And if the new 1923 alloy is in some degree less unlucky than that of 1920-21 [if it does not, for example, flake off and come to pieces in our hands, or turn copper brown, like the first issues of Mr. Austen Chamberlain], it has certain minor defects. There is a slight pinkish deposit or glaze forming on the service of this new issue, as it gets into wear. It seems to be spreading from the lettering inward; how far it will go I do not know. But at any rate there is very much less of it being issued—the bulk of the money now circulating continues to be mainly war-stuff of 1914-18, plus a very large proportion of base 1920-21 coins which are of the well-known lemon-yellow tinge. I proposed to the Chancellor of the Exchequer this spring that he should make a great effort, and get the first Chamberlain issues withdrawn from circulation. I am sorry to say that he refused, on purely financial grounds—the sum which would have to be paid to the Banks for sorting it out would be appreciable—more than any department likes to pay, now that the “Geddes Axe” has fallen. Moreover, the Mint has already been charged this year with a considerable sum. The war years called for huge issues of silver coin, which now lie redundant in the cellars of Banks, and they have insisted on shooting some of it back on the Mint, which had actually to repurchase £750,000 of it this spring. The State has to pay the same price at which the silver was issued—i.e. to give a £1 Bradbury for every 20 shillings. But the bullion-worth of the returned stuff was, for it was, alas, all of it good old silver of Victorian and Edwardian issues, about half of its facial value; the debased Georgian post-war issues are still circulating freely. Hence a very serious sum has to be refunded to the public, owing to the over-issue in the unhappy time of inflation. I still cherish

some hope that less depressing days for the British coinage are before us, as I know that the new Deputy-Master of the Mint has a most sympathetic feeling for our petitions, and is fully conscious of the defects of the issues left to him by his predecessors, thanks to the policy of vanished Chancellors of the Exchequer. One suggestion has come to me in an unofficial way of late—that some reform of the larger pieces in our monetary series would be possible if we committed ourselves to the step of substituting nickel threepenny and sixpenny coins for the present half-silver ones. The threepence is not a popular coin of late, owing to its inconvenient smallness. The sixpence is popular, but gets worn away to a flat circle in a very few years, owing to its enormous circulation from hand to hand. Any observer will note how inferior the Victorian or Edwardian sixpence received in change is to the shilling of the corresponding year. I do not think that there would be any great disadvantage in coining pure nickel threepences and sixpences, if we could buy in exchange a good-quality florin and half-crown. Any one who has handled Swiss fractional currency will remember how very well the 20 centime piece preserves its types after many years of issue. Silver half-francs of the same years show double the amount of wear and attrition. The only difficulty that I can see in the project is that if the nickel threepence was increased in size, for convenience sake, it would be too much like a sixpence. While if the sixpence was increased in a corresponding fashion, to avoid confusion with the threepence, it might grow too much like a shilling—even if it were made of thick fabric and with unmilled edges, like the higher value nickel coins of France and Italy. But this is only a suggestion. I know not how much fact there is behind the rumour that a British nickel coinage may be impending.

While dealing with things governmental, it may be worth stating that this Society was one of many learned bodies which entered a prompt protest against the project for imposing an entrance-fee on visitors to the British Museum on certain days of the week. I was charged with the transmission of our censure to the Chancellor of the Exchequer,

and a few days later the whole scheme was withdrawn. But I fear that we cannot flatter ourselves that we had the deciding voice on the matter: the indignation expressed was widespread, and I think highly justifiable.

Another governmental act of the last month has provoked some discontent among members of the Society. Several of them thought fit to write me letters on the subject. This is the selling of the duplicates of the British Museum Greek coins at Lucerne, apparently to some extent under the patronage of the well-known Dr. Jacob Hirsch, of Munich. Questions were asked about this move in Parliament, and there was correspondence about it in the *Times* and other papers. The answer given by the Financial Secretary to the Treasury about the sale at Lucerne was that the Trustees of the British Museum considered that there was a better international market for Greek coins on the continent than in London. This was certainly not the case in the old days, and if the fact is correct it indicates a bad time coming for British collectors who are unable to travel in the midst of the busy season of the year. For if the British Museum sells its coins abroad, what private person will have any scruple at doing the same? Personally I was depressed by receiving my copy of the catalogue from the great Dr. Hirsch, and by reading in the preface on page 1 the paragraphs in which foreign buyers are told of the privilege which they enjoy of seeing coins collected by Lord Elgin, Payne-Knight, or Cunningham offered to them when no such chance has been given at any time to the local British collectors. Of course the bulk of the pieces at this sale came from other collections; I have recognized among them rarities which have been put to auction at Lucerne on previous occasions, and obviously "bought in" by the syndicate which runs these sales. And I may be wrong, but I rather fancied that I detected one or two pieces which bore a suspicious resemblance to the work of Christodoulos. A careful perusal of the catalogue is needed to discover which pieces came from the British Museum—whose name on the title-page was no doubt intended to cover the whole mass with a high respectability.

But to turn to the year's work of the Society. The usual number of meetings have been held—two of them were special "exhibition" meetings, at which members were invited to bring down rare pieces which had recently come into their possession, or which had never been published or displayed before. We got a very good show on each occasion, including some very exceptional coins, such as Mr. Wheeler's half-groat of Canterbury of Henry III, Mr. Gilbert's unpublished billon "antoninianus" of the two Tetrici, father and son, with their heads side by side, and Mr. Walters's bronze medallion of Constantine, showing the bridge over the Danube, which was found at Westersham in 1916. The two former are unique; the latter is apparently from a different die to the only other specimen hitherto known, that in the Paris cabinet which is catalogued in Cohen. Many other pieces almost equally rare were placed before our admiring eyes. The British coin-collector still has occasionally moments of well-deserved luck.

Of the papers read to us at the normal meetings of the Society there was a decided predominance of importance this year in the Roman section. Probably this may be attributed to the fact that several of our most valued members are at work at present on books dealing with the Romans. The splendid British Museum Catalogue of the period Augustus—Vitellius has just appeared, and I am told that the first volume of the standard work, in which Messrs. Sydenham and Mattingly are collaborating, is due to come out at no distant date. Hence, naturally, articles which have come as side-studies from one or other of these much-desired compilations have been made available for us. The first, read at the November meeting, was Mr. Mattingly's on "Serrate denarii of the Roman Republic"; those curious issues divided from each other by long gaps, in which the edge shows a not always sightly series of notches or cuts. Mr. Mattingly recorded this rough milling as sort of governmental demonstration against the issue of plated denarii, which had become too common, and considered that the shape was supposed to offer a guarantee against

the existence of a copper core. Nevertheless, such is the frailty of man (or of moneyers!), that a few plated *serrati* have been noted. Mr. Mattingly suggested that of the five groups known of these coins the most important belongs to the period of the Marian reaction against senatorial government. The well-known Praetor Marius Gratidianus may have been responsible for some of the issues: Sertorius in Spain for more, issued between 80 and 73 B. C., during his long and successful resistance to the Sullan armies. But there are earlier groups, perhaps connected with the founding of Narbo Martius in 118 B. C. by Valerius Flaccus, and later ones connected with Julius Caesar's governorship in Gaul, and belonging to the years 59-51 B. C. The way in which these curious coins were struck, whether by using a notched *flan*, or by cutting the edge after the coin had been struck, remains somewhat of a puzzle. To carry out the latter task must have been an intolerable nuisance, yet the inspection of the coins themselves does not seem to favour the idea that they were milled before being put between the dies.

Our other long Roman paper was also largely on the Republican period, though the subject stretched on into the days of the early Empire. Mr. Sydenham read us in January a monograph on the various sorts of Senatorial coins which bear the inscription S. C. He showed that these pieces can not be dissociated from others which bear the parallel inscription EX A. P. or D. S. S. The problem was to discover the sort of occasions on which a person who was not one of the regular *Tresviri Monetales*, nor a provincial governor, nor the quaestor of a governor, was granted the abnormal right of striking money by a special decree of the Senate. They apparently ranged over all sorts of special crises; e. g. famine such as that which occasioned the issue of the AD FRU[*mentum*] EMU[*ndum*] piece of Piso and Caepio, and no doubt those also of Fannius and Critonius, who sit also among ears of corn like Piso and Caepio, though they are specially designated as AED[*iles*] PL[*ebei*]. But military purposes are no doubt implied on the gold aurei of Cestius and Norbanus with the S. C.,

struck by two praetors in the chaos that followed immediately after the murder of Caesar; while from the types of his money it would seem likely that the profuse issues of Plaetorius Cestianus, Curule Aedile in 69, were from a special senatorial grant to celebrate the Megalensian games. So, too, may the coins of the aediles Scaurus and Hypsaeus have been, since we know that they also celebrated games of great magnificence.

A third, and shorter, Roman paper was read in February, when our Treasurer gave us some interesting considerations on the silver money of Carausius. The origin of this abnormal issue are most puzzling: there had been no good silver money issued from any Roman mint for some fifty years, when this usurper in a remote corner of the Empire reverted to the employment of veritable silver denarii. It was only some years after he had struck them that Diocletian and Maximian followed suit, and produced their much better known "ninety-six to the pound" silver pieces. Nearly all Carausius's silver bears in the exergue the letters R S R, which is also found on a few gold and copper coins. What do the letters mean? Not a mint apparently, though Rotomagus and Rutupiae have been suggested; nor certainly a mark of value, since the letters are found alike on gold, silver, and copper. Possibly the record of a mint reform—RENOVATIO or RESTITUTOR being the meaning of one of the two R's—S would do for SACRI or SACRAE or SAECULI, but what then is the second R? We can hardly dare to guess at RENOVATIO SAECULI ROMANI or RESTITVTOR SACRORVM ROMANORVM. Yet, as Mr. Webb observed, "with so much ascertained, a solution should not be far to seek". But it has not yet been found.

While speaking of the Romans, we may congratulate Messrs. Webb, Gilbert, and Haines on some extraordinarily scarce pieces which they exhibited at one time and another—"2nd Brass" of Florian and Carus, silver of Severus II and Alexander the Usurper at Carthage, billon of Martinian and Domitius Domitianus, an exceptionally fine Cornelia Supera, and other pieces which though not actually unique or unpublished are of the very highest degree of rarity.

It is seldom that we are given a paper on any coinage questions older than those of Ancient Greece. But this year, by exception, we had an interesting communication sent from Mesopotamia by Mr. Sydney Smith, dealing with what he considered as something that could be described as a currency of token-money, dating back for many hundred years before Pheidon or Gyges or any other founder of a coin system in historic days. It would appear that, from cuniform documents recently translated, lumps of lead with the stamp of a town-magistrate upon them may have served as pledges for payment in Ancient Assyria. The town-stamp would seem to give these pieces some claim to be regarded as an official currency, though no one could say the same about Chinese "sycee" silver with merchants' marks alone stamped on it. There appears to be strong evidence for the circulation of these leaden half-shekels, but unfortunately no specimen of them has yet turned up. The pieces of which photographs were shown us decidedly appear to be weights rather than coins. When an actual half-shekel with the official seal turns up, we shall be better able to decide whether it can be considered as a coin, or rather perhaps as a token. Till then the whole question must, I think, be considered as still "sub judice". But the discovery is an interesting one.

Our Greek section is represented this year only by one paper, that of the Keeper of the Coins of the National Collection on the acquisitions of 1922—the very large Bactrian and Indo-Greek series got in the Whitehead Collection being alone excluded, to serve no doubt for a separate paper some day. By far the most important piece which was chronicled was the noble Syracusan decadrachm by a new artist, certainly neither Cimon nor Evaenetos, which the Museum received last year as a gift from Mr. E. P. Thompson. This unique piece is, by rare good fortune, both well struck up, well centred, and free from oxidation. The general type follows the known issues very closely, only some slight variation in the treatment of the exergue of the reverse being noticeable. But the style of art is very distinct from that of the other two die-sinkers, the head of

Arethusa being less severe and massive than on Cimon's coins, but not quite so merely young and pretty as that on Evænetus's money. It is a most magnificent acquisition for the Museum, as beautiful as it is rare.

Among other pieces illustrated by Mr. Hill were two interesting late archaic tetradrachms of Mende, part no doubt of the recently discovered hoard of which several are to be seen in the Lucerne sale of June 16. It is surprising to find so many varieties of type of a coin which till a short time ago was reckoned very rare. We may also mention a tetradrachm of Aenos with a more archaic head of Hermes than those hitherto chronicled, a very fine specimen of the late tetradrachm of Alexandria. Troas with the standing Apollo Smintheus, and a very rare Thracian obol, with obverse free horse and reverse wine-jar.

Though there was no paper read upon it, I must specially mention one very unusual coin exhibited in October by Mr. Woodward—an archaic tetradrachm of Syracuse in which the normal Victory who crowns the horses of the victorious charioteer has no wings. I never saw any parallel to this. Are we dealing with a mere piece of engraver's carelessness, or was Syracuse aware of the existence of Nike Apteros, the wingless Victory known at Athens?

In English numismatics we have one discovery to chronicle this year, which is as startling in its way as that of the new artist who worked on Syracusan tetradrachms. If there was any class of money of which we thought that we were in possession of every variety, it was the pence of Edward I, the most common of all mediæval English coins. Yet on February 15 Mr. Lawrence was able to read us a paper on a perfectly new type of that king, which had been lying for some years (*mirabile dictu!*) in the British Museum, masquerading as a foreign imitation of the sterling. This penny evidently belongs to the first issues of Edward I; it differs from all the rest by having on its reverse not the usual cross pattée and pellets, but a long double cross, with a rose of five petals in each quarter. The type recalls the gold penny of Henry III, not any of his son's other issues: hence it was suggested that this may conceivably have been

a silver pattern for a gold penny of Edward I, which for some reason or other never came into being. But the coinage-indenture of 1279 does not suggest any experiments with a gold standard, so that it is perhaps safer to regard this unique penny as a trial design for the new silver coinage, which was rejected in favour of that cross and pellets type which was destined to endure for so many generations.

This coin is such an entirely new discovery, and of so much interest in itself, that it rather casts into the shade other exhibits of this year; nevertheless, some of them were of high interest, such as Mr. Wheeler's already mentioned half-groat of Henry III, his Berwick farthing of Edward II with bears' heads in two quarters of the reverse, and Mr. Ryan's double sovereign and Ryal of Henry III. Why the latter coin has the arms of France on the king's shield on the reverse instead of the full arms of France and England quarterly, like other nobles and ryals, remains an unexplained point.

Ireland being no longer part of our United Kingdom, I suppose that I ought to treat as a separate category from British coins the mediaeval issues of that country. We had in March a paper by Mr. Brooke on the harp-groats of Henry VIII, which proved pretty decisively that the accepted date for their first emission must be shifted. The proclamation of the new style of the king as *Rex Hiberniae* instead of *Dominus Hiberniae* was made in January 1542, and it was generally assumed that the Irish coinage with the changed title began immediately after the proclamation. Mr. Brooke, however, proved that the issue was postponed till 1544, owing to a difficulty which arose as to the intervaluation of gold and silver money, it being clearly impossible to adhere to the old gold standard when once the new had been put into currency. So the latter was delayed till the new standard of valuation of gold had been made, in which the angel was cried up from 7s. 6d. to 8s. Harb-groats, with the queen's initial K and the *Rex Hiberniae* upon them, must therefore all belong to the period when Katherine Parr was the king's consort, Katherine Howard

having been beheaded before the new Irish emission was put into circulation.

One could wish that papers on modern coins had been more numerous this year; there are still plenty of enigmas still unsolved both in British and foreign numismatics, which might engage the ingenuity of our members. We have had interesting papers on Anglo-Gallic numismatics in quite recent years, but very little on Colonial—especially American—or Anglo-Hanoverian issues.

Passing on to things external, I ought perhaps to mention that the Government has offered a prize of 100 guineas for the best medal design to celebrate the opening of the Empire Exhibition that is to be held next year—with smaller bonuses for competitors whose efforts are held praiseworthy, but whose medals have not been accepted. This is a new departure from recent years, and I sincerely hope that it will lead to the discovery of one or two new medallists. We have not too many at present, and some of those chosen for official work, particularly on the new coinage of George V and on the war-medals, have not particularly recommended themselves to the critic. In especial I think the present series of designs for the reverse of our present currency about the weakest set that were ever gathered together. The niggling work of the reverse of the half-crown is only surpassed in badness by the baldness of the florin, which took a general design that was not unpleasing under Anne or George II, and somehow succeeded in making it unsatisfactory—probably by the poor shape of the shields, and the want of any decoration in their angles such as was usual (though not universal) in the old issues of the early eighteenth century.

Mr. F. A. Harrison proposed and Mr. H. Garside seconded a vote of thanks to the President for his address.

40 PROCEEDINGS OF THE ROYAL NUMISMATIC SOCIETY.

The result of the ballot for office-bearers for 1923-1924 was announced as follows :

President.

PROFESSOR SIR CHARLES OMAN, K.B.E., M.P., M.A., LL.D.,
F.S.A., F.B.A.

Vice-Presidents.

SIR ARTHUR J. EVANS, M.A., D.LITT., LL.D., PH.D., F.R.S.,
F.S.A., F.B.A.

SIR HENRY H. HOWORTH, K.C.I.E., F.R.S., F.S.A.

Treasurer.

PERCY H. WEBB, Esq., M.B.E.

Secretaries.

JOHN ALLAN, Esq., M.A., M.R.A.S.

FREDERICK A. WALTERS, Esq., F.S.A.

Foreign Secretary.

GEORGE C. BROOKE, Esq., M.A.

Librarian.

L. A. LAWRENCE, Esq., F.S.A.

Members of the Council.

V. B. CROWTHER-BEYNON, Esq., M.A., F.S.A., M.B.E.

LADY EVANS, M.A. (OXON).

MISS HELEN FARQUHAR.

LIONEL L. FLETCHER, Esq.

WILLIAM GILBERT, Esq., M.S.A.

FREDERICK A. HARRISON, Esq., F.Z.S.

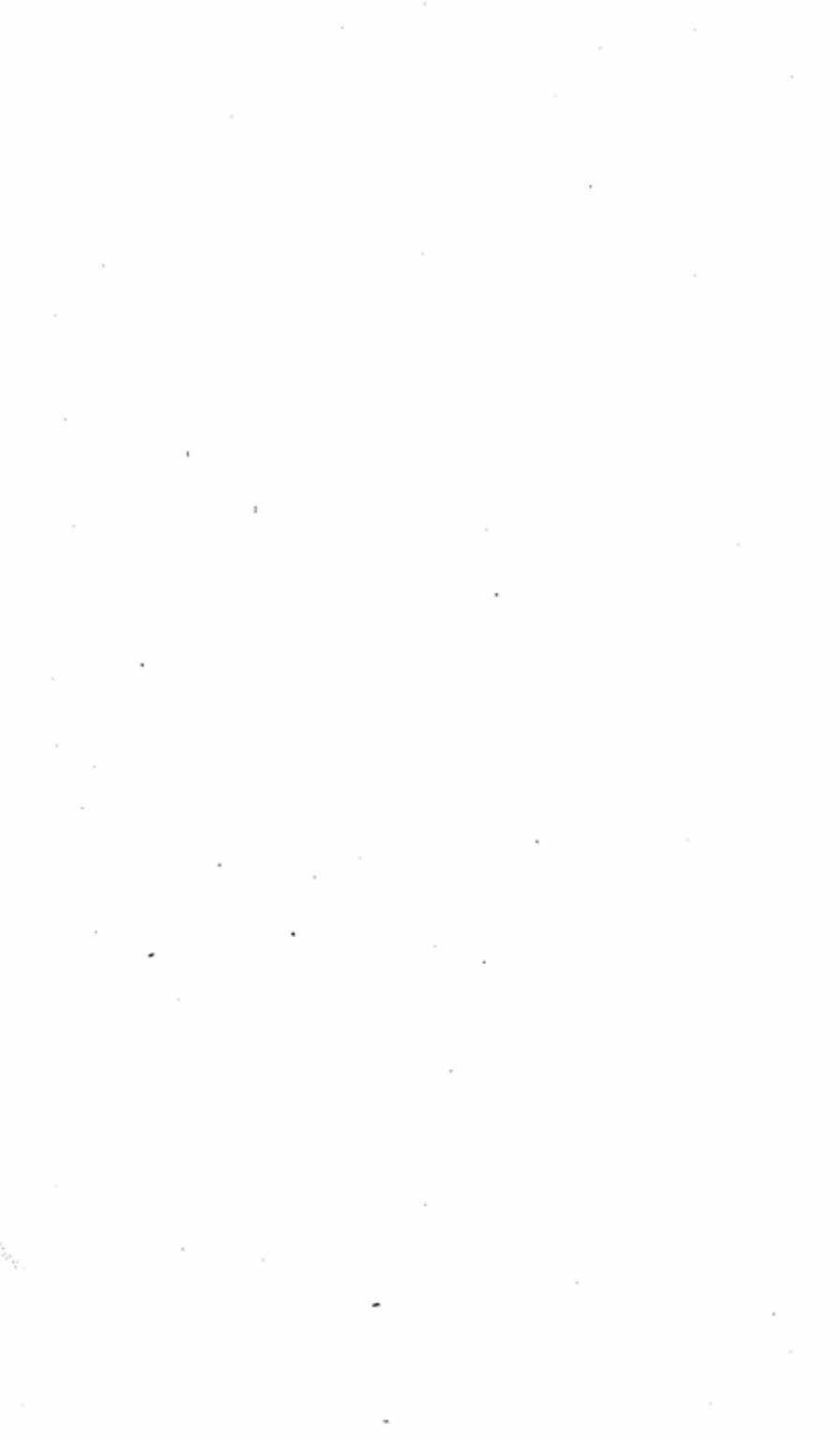
GEORGE F. HILL, Esq., M.A., LL.D., LITT.D., F.B.A.

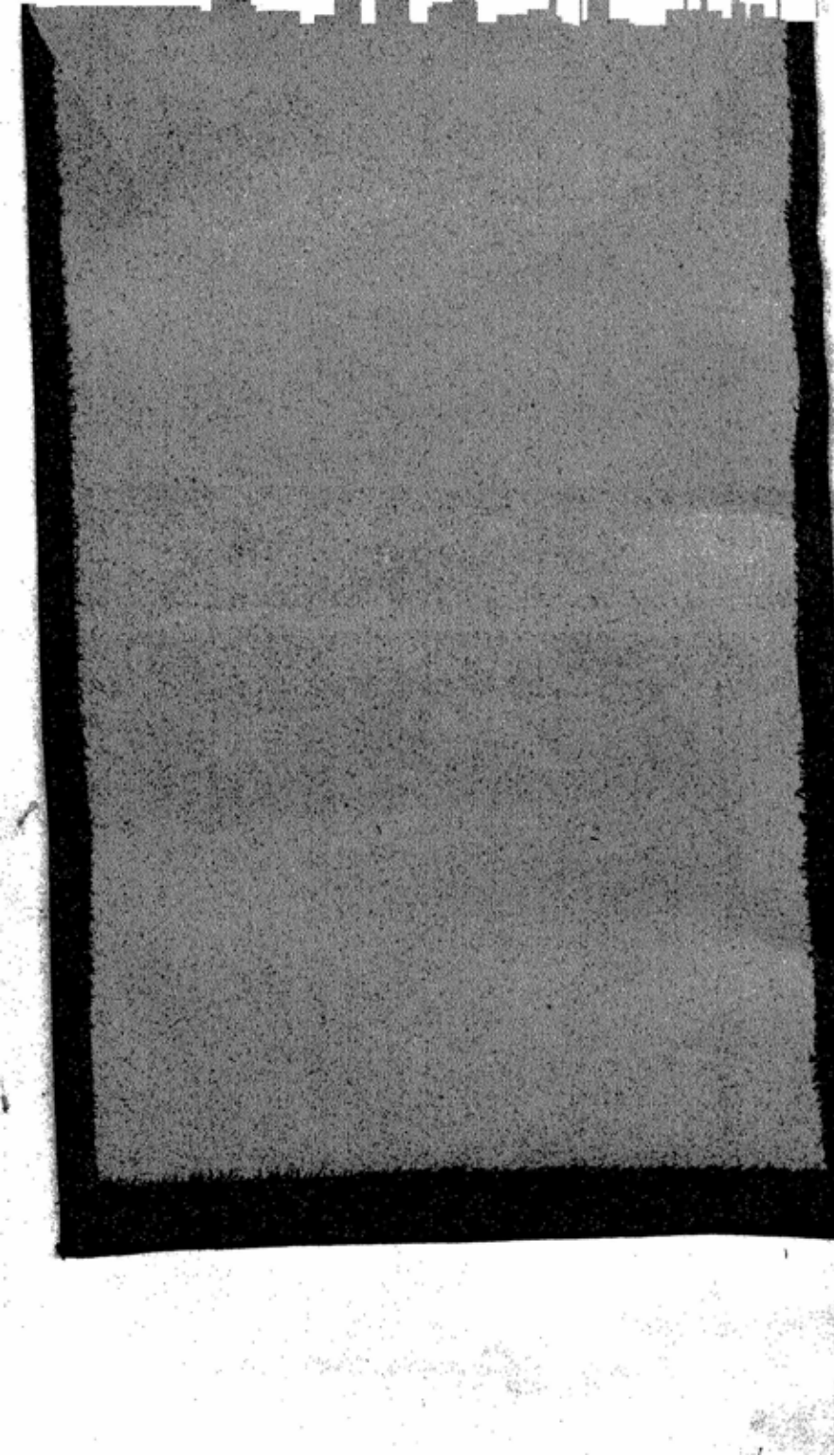
HAROLD MATTINGLY, Esq., M.A.

LIEUT.-COL. H. W. MORRIESEN, R.A., F.S.A., F.R.S.A.

E. S. G. ROBINSON, Esq., B.A.

The President proposed a vote of thanks to the Auditors and Scrutineers of the ballot, and adjourned the Society till October.





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